

VIGNOLA

AN ELEMENTARY TREATISE ON ARCHITECTURE COMPRISING THE COMPLETE
STUDY OF THE FIVE ORDERS, WITH INDICATION OF THEIR SHADOWS
AND THE FIRST PRINCIPLES OF CONSTRUCTION

WORK DIVIDED INTO SEVENTY-SIX PLATES
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PREFACE

The plates in the present edition are supplied by the French Publisher and the English translation is printed in the United States.

Several years ago a translated edition was published of the J. A. Leveil-Vignola for student use. That edition is out of print and the present revised book is based on it.

Much of the data of the former edition has been condensed and many new plates added.

The text of the present edition gives as near as possible, the exact sense of the French, but is not a literal translation.

All of the text and notions of value to the student have been translated and supplemented with a glossary and foot notes. This is essential in that Vignola is the primer of the architectural student.

Translator.

Cleveland, O., August 4, 1921.

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(See Glossary at End of Volume)

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PLATE 1

EXPLANATORY PARALLEL OF THE FIVE ORDERS OF ARCHITECTURE AND THEIR RELATIVE PROPORTIONS, ACCORDING TO VIGNOLA

An order is the architectural mass formed by the necessary elements which support the solid parts above the voids. When it is complete, the order comprises an entablature, a column and a pedestal. The pedestal is not essential.

The relative proportions of these elements must vary according to the nature of the materials used and the degree of richness which one wishes to obtain. The various orders are divided into five types and are called the Tuscan, the Doric, the Ionic, the Corinthian and the Composite. The proportions are according to Vignola, but are not fixed. We must not lose sight of the fact, however, that they are average and a wrong use of them is made when, without reason, one deviates too far.

This plate offers the parallel of the five orders of Architecture given by Vignola. The line of heights divided into 32 equal parts, called modules*, indicates the proportion that each order bears to the others. The Tuscan, Doric and Ionic have the same relative proportions, as shown by the lines AA-BB-CC—that is to say, in all three cases the pedestal measures one-third of the column, and the entablature one-fourth. It is only in the Corinthian and Composite that Vignola has thought it necessary to change that proportion; while preserving to the entablature its one-fourth of the column, he has raised the pedestal one-third of a module, in order to render these two orders still more elegant. This gives the pedestal seven modules, or one-third of a module more than the customary 6 2-3 modules of the first three orders. For the first two orders the module is divided into 12 parts and into 18 for the last three.

GLOSSARY**

JW
Echelle pour le, etc. Scale for the, etc.
Module (Latin). Arbitrary term for a unit of measure or proportion.

Partie.*** Part or minute—arbitrary division of the module.

TRANSLATOR'S NOTES

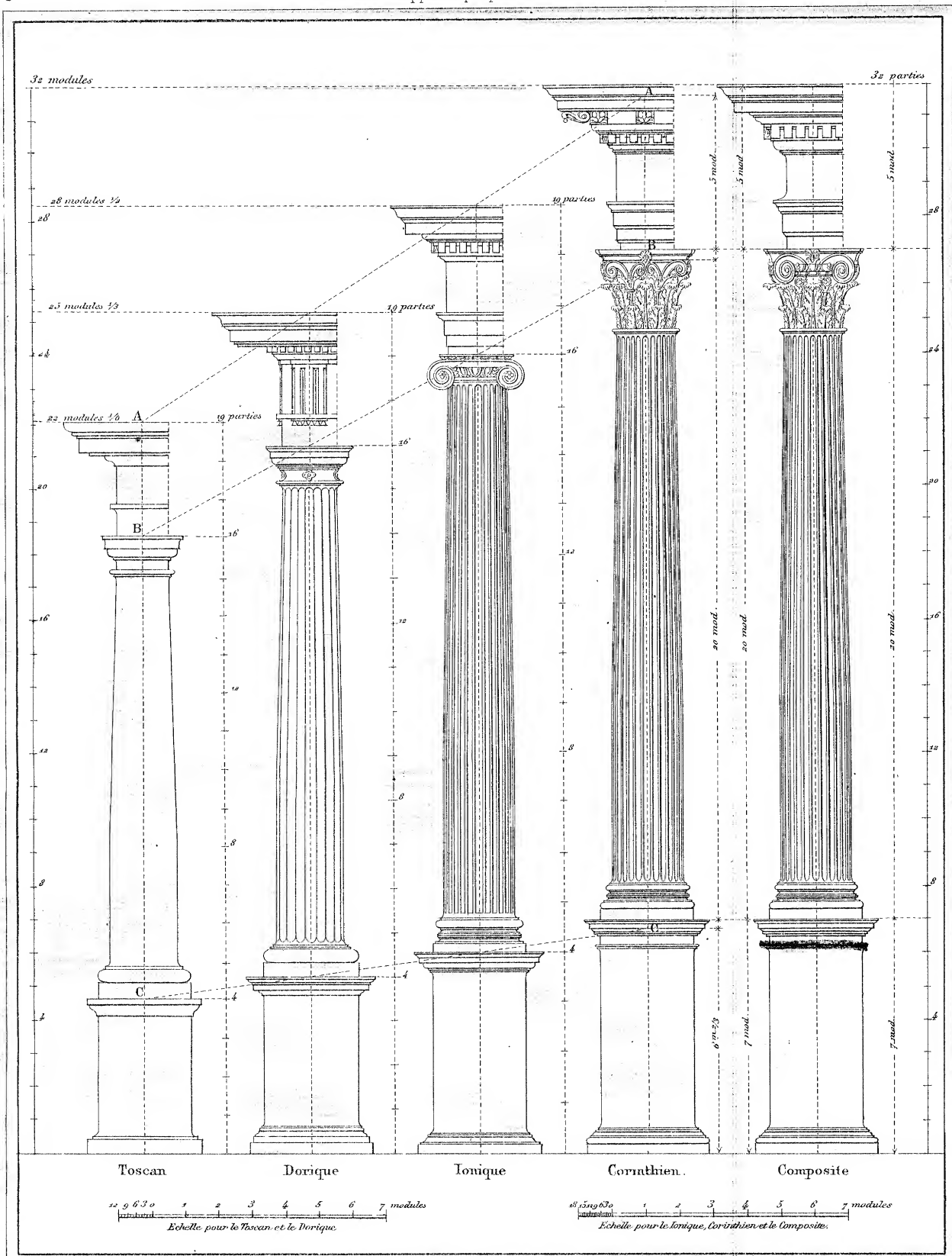
*Vignola's module is one-half the diameter of the column, measured in the Tuscan and Doric orders, through the cylindrical part above the base, and just above the cornice in the other three. Vitruvius' modules are the same for the Doric, but a full diameter for all the others.

**Regarding this work as a continuous text-book, it has been thought necessary to repeat in the Glossary oftener than enough to fix definitions in the student's mind. The Glossary will therefore be found more complete in the first few pages.

***Vignola has divided his module into 12 parts or minutes for the Tuscan and Doric orders, and into 18 parts for the others. Palladio, Cambria, Desgodetz and Le Clerc, all divided the module into 30 parts for each order.

PARALLELE EXPLICATIF DES CINQ ORDRES D'ARCHITECTURE D'APRÈS VIGNOLE
et de leurs rapports proportionnels entre eux

PL I



P. Esquisé del.

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Strassmann & Co.

Un ordre est l'ensemble architectural formé par les éléments nécessaires pour soutenir des parties pleines au dessus de parties vides. Quand il est complet, l'ordre comporte un entablement, une Colonne et un piédestal. Le piédestal n'est pas indispensable.

Les proportions relatives de ces éléments devant varier suivant la nature des matériaux mis en œuvre et le degré de richesse que l'on désire obtenir, on a ramené les divers systèmes à cinq types que l'on nomme : le Toscan, le Dorique, l' Ionique, le Corinthien et le Composite. Les proportions que nous donnons d'après Vignole n'ont rien d'absolu, mais on ne devra pas perdre de vue que ce sont des moyennes et qu'en son écartant trop et sans raison on s'expose à commettre de véritables contre sens.

Cette planche offre le parallèle des cinq ordres d'architecture donnés par Vignole, nous faisons voir par la ligne de division de hauteur en 32 parties [cette partie étant considérée comme le module] la proportion que les ordres ont entr'eux. Le Toscan, le Dorique et l' Ionique ont les mêmes proportions relatives, comme on le voit par les lignes AA - BB - CC, c'est à dire que pour ces trois ordres le piédestal à $\frac{1}{2}$ de la colonne et l'entablement le $\frac{1}{4}$, il n'y a que pour les ordres Corinthiens et Composite que Vignole a cru devoir changer cette proportion, tout en conservant à l'entablement le $\frac{1}{4}$ de la hauteur de la colonne, il a exhaussé le piédestal de $\frac{1}{2}$ de module afin de rendre ces deux ordres

PLATE 2
OUTLINE OF MOULDINGS

The drawing of tangent lines and circumferences is indispensable in making details. This operation consists in connecting one line to another in such a manner as not to form any irregularities between them. These junctions are used in architecture in a number of ways, and particularly in the outline of mouldings. Mouldings are divided into simple and compound. The principal mouldings are the cavetto, quarter round and the torus. The compound mouldings are the syma recta, ogee and the scotia. The cavetto is a concave quarter circle in which the projection is equal to the height. An examination of the first three figures will enable one to understand the outline.

The Doucine or cyma recta is a curved moulding in which the upper part is concave and the projection equal to the height. This is its outline; the projection AC being taken equal to the height AB, join BC by a straight line which is divided into two equal parts at a point D. On the sides DB-DC construct equilateral triangles, one inside and one outside, which determine the centers OO' for arcs of circles CDB which form the cyma recta.

The talon or ogee is a moulding formed by joining two arcs of circles. An examination of the figure explains the outline. The scotia is a hollow moulding usually placed between two vertical members. The parallel lines mt XT and their respective points Tt being given through the points of contact Tt and through n taken anywhere on mt erect perpendiculars tO' Ti, nX. Take Xy equal to $\frac{1}{3}$ Xn and through y draw yi parallel to mt which will determine the point by its intersection with Ti, at the point i describe the arc TK, take iO equal to $\frac{1}{3}$ of Ki, from the point O describe KH equal to $\frac{1}{2}$ the arc TK, then take OZ equal to $\frac{1}{4}$ of OH, take HZ equal to tQ and join Z and Q by a line ZQ and erect the perpendicular MO in the middle of this line, which will determine the point O', the point Z will be the center of HL and O' of t.

GLOSSARY

Cavet. Cavetto.

Doucine. Cyma recta or cymatium.

Gueule droite. Cyma recta or cymatium.

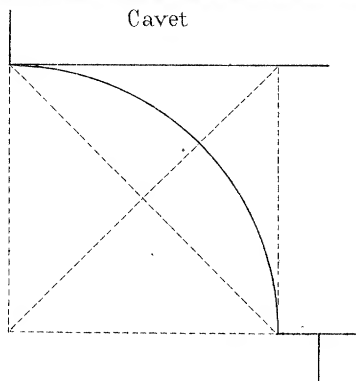
Quart de rond. Quarter round.

Scotie. Scotia.

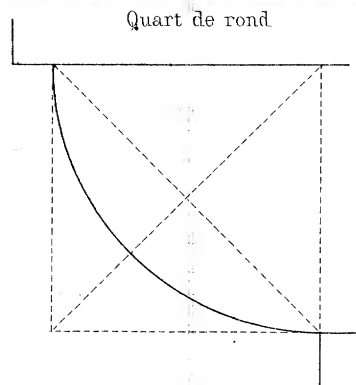
Talon. Heel moulding or ogee.

Tore. Torus.

Cavet

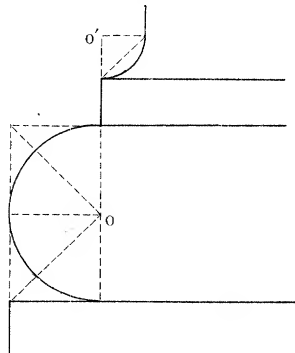


Quart de rond

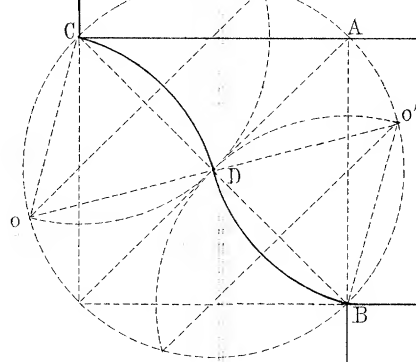


Le tracé des droites et des circonférences tangentes est indispensable pour opérer ce que l'on appelle Raccordement. Cette opération consiste à lier les lignes les unes aux autres de manière à ne former entre elles aucun Jarret. Les raccords s'emploient en architecture dans une foule de cas, et notamment dans le tracé des moulures. Les moulures se divisent en *simples* et *composées*. Les principales moulures sont le Cavet, le Quart de rond et la Tore. Les moulures composées; la Doucine, le Talon et la Scotie. Le cavet est un quart de cercle rentrant, dont la saillie égale la hauteur. L'inspection des 3 premières figures suffira pour en comprendre le tracé.

Tore

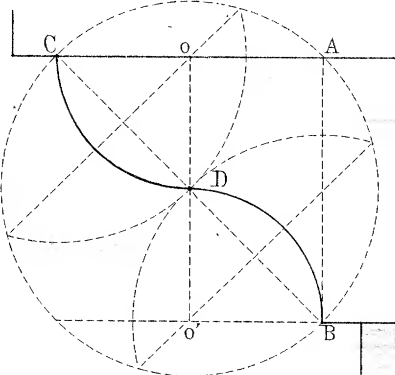


Doucine

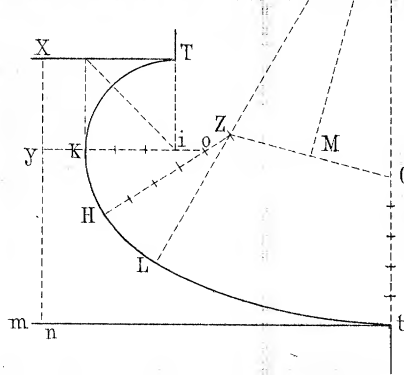


La Doucine ou Gueule droite est une moulure sinieuse dont la partie supérieure est concave et la saillie égale à la hauteur. Voici son tracé: la saillie AC étant prise égale à la hauteur AB on joint BC par une droite qu'on divise en deux parties égales au point D. Sur les côtés DB, DC on construit l'un en dedans, l'autre en dehors, deux triangles équilatéraux qui déterminent les centres O O' des arcs de cercle CDB qui forment la doucine.

Talon



Scotie



Le Talon est une moulure formée par deux arcs de cercle raccordés dont l'inspection de la figure explique le tracé.

La Scotie est une moulure creuse placée ordinairement entre deux portées verticales, tracé: les parallèles $m t$ $X T$ et leurs points respectifs $T t$ étant donnés par les points de tangence $T t$ et par n quelconque pris sur $m t$ élever les perpendiculaires $t O'$, $T i$, $n X$. Prenez $Xy = \frac{1}{2} Xn$ et par y menez yi parallèle à $m t$ qui déterminera le point par son intersection avec $T i$ décrivez du point i le quart de cercle $T K$, portez $i O = \frac{1}{2}$ de $K i$, du point O décrivez la $K H = \frac{1}{2}$ arc $T K$ portez ensuite $O Z = \frac{1}{2}$ de $O H$ portez $H Z = t Q$, joignez Z et Q par une droite $Z Q$ et élevez une perpendiculaire $M O$ au milieu de cette droite qui déterminera O' , le point Z sera le centre de $H L$ et O' de t .

PLATE 3
TUSCAN INTERCOLUMNIATION

The distance between columns is called intercolumniation—the intercolumniation should never be so great that the apparent or real solidity may be affected nor so close as to prevent the entrance of light or the passage of people. In colonnade the intercolumniation should be equal unless it is necessary to open a large passage in the center for a principal entrance.

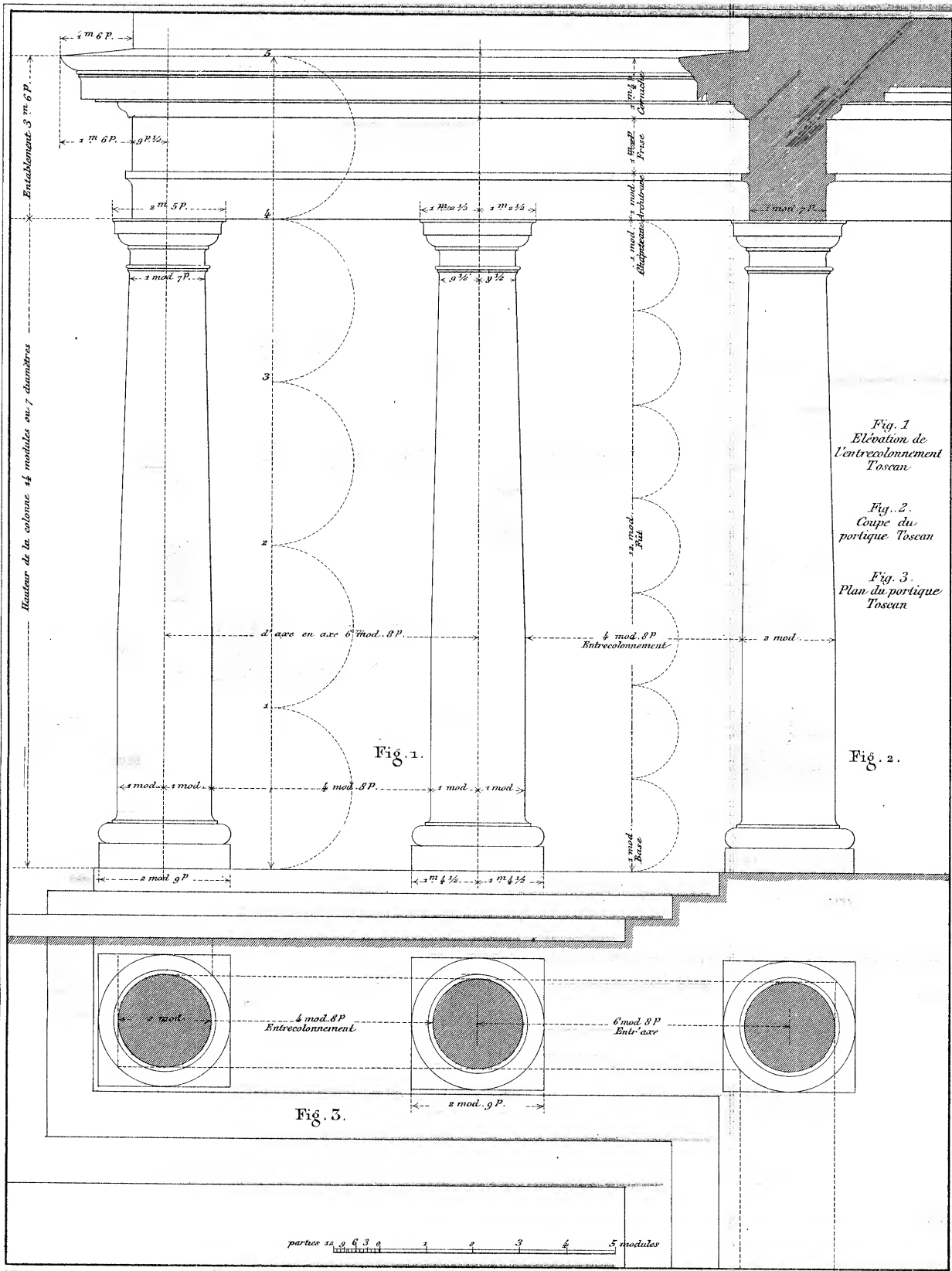
Vignola, having found nothing among antiquities, which would serve for a type of the Tuscan Order, has conformed to the rules of Vitruvius, where he says that the height of the column is 7 times its diameter, or 14 modules, base and capital included.

To draw the Tuscan intercolumniation, it is necessary to divide the total height into 5 parts. The upper part will be for the entablature, and the 4 remaining parts for the column. Divide these 4 parts into 14 and one-fourteenth will be the length of the module. After making its scale, draw two perpendicular lines $6\frac{2}{3}$ modules apart; these will be the axes of two columns. Giving 1 module to the base and another to the capital, there remain 12 for the shaft, which is cylindrical $\frac{1}{3}$ of its height from the base, and diminishes progressively from that point to a point immediately below the astragal, where it is only one module and 7 parts in diameter. The diminution of columns with directions for drawing them will be given later.

GLOSSARY

D'axe en axe. From axis to axis.

Portique. Portico.



L. Enquâ del.

CHARLES SCHMID EDITEUR, La Rue des Ecoles, Paris.

Straumann sc.

La distance d'une colonne à l'autre s'appelle l'Entrecolonnement. L'entrecolonnement ne doit jamais être assez grand pour que la solidité réelle ou apparente ait à en souffrir, ni assez étroit pour empêcher l'accès de la lumière ou le passage des hommes. Dans une colonnade, les entrecolonnements doivent être égaux à moins qu'il n'y ait nécessité d'ouvrir un grand passage au milieu pour une entrée principale.

Vignole n'ayant rien trouvé dans les antiquités qui puisse servir de type à l'ordre toscan, s'est conformé aux règles de Vitruve où il dit que la hauteur de la colonne est de sept fois son diamètre chapiteau et base compris ou 14 modules.

Pour dessiner un entrecolonnement Toscan il faut diviser la hauteur totale en 5 parties, la partie supérieure sera pour l'entablement, et les quatre autres parties seront pour la colonne, on divisera ces quatre parties en 12 et le 1/4 sera la longueur du module, on tracera ensuite après avoir fait son échelle deux lignes perpendiculaires distantes entr'elles de 6 modules 2/3, elles seront les axes des deux colonnes, en portant un module pour la base et un autre pour le chapiteau, il restera 12 modules pour le fût qui

PLATE 4

TUSCAN PORTICO WITHOUT PEDESTAL

Porticos with arcades are used on the rez-de-chaussée (ground floor) because arches are stronger than stone lintels. This plate shows the elevation of a Tuscan portico without pedestal. It will be noticed that the columns are engaged $\frac{3}{8}$ of their diameter or 9 parts, into the piers. It is necessary, as for the intercolumniation, to divide the height into 5 equal parts, of which 4 belong to the column and 1 to the entablature, then to divide the height of the column into 14 parts to find the module or half diameter; then raise two perpendiculars, $9\frac{1}{2}$ modules apart, for the axes of the columns. Draw the piers $1\frac{1}{2}$ modules on each side of these perpendiculars. For the keystone, descend 1 module upon the center line of the arch; then going downward 3 modules and 3 parts, or $\frac{1}{2}$ the width of the arcade, you find the height of the impost. It will be remarked that this arcade is in height exactly twice its width, the measurement usually adopted by Vignola.

The relation between the width of the opening and the pier can vary. The construction appears heavy when the width of the pier equals that of the opening and on the contrary it appears slender and not sufficiently strong when the width of the opening equals three times that of the pier. The most suitable proportion is to have the width of the pier equal to one-half that of the opening.

The arrangement of a portico should change according to its actual dimensions and the material employed. An example in outline is given.

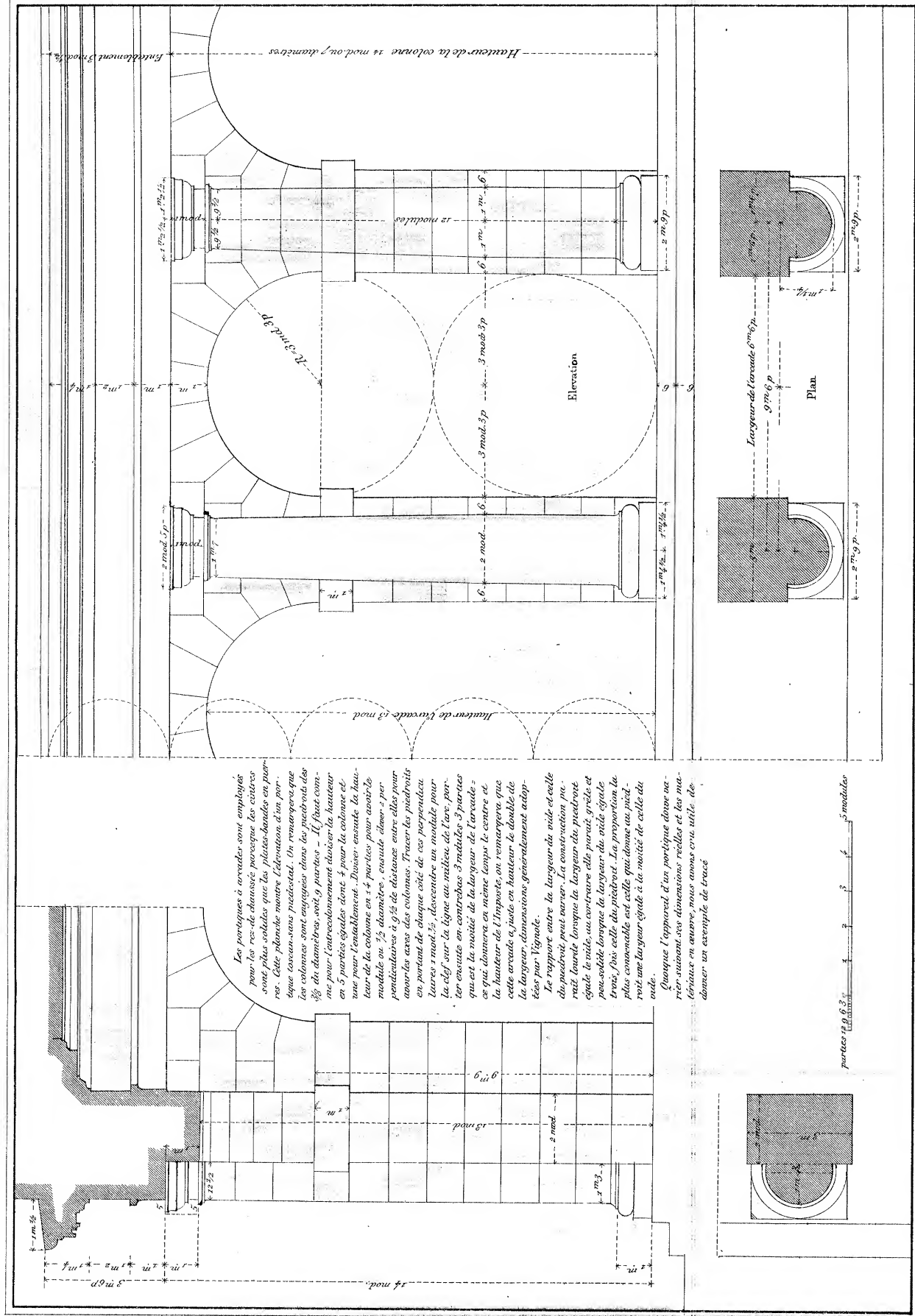


PLATE 5

TUSCAN PORTICO WITH PEDESTAL

Porticos with pedestals are generally used when the peristyles are enclosed with a breast-high balustrade in order to avoid joining the railing with the column.

To draw the Tuscan portico with pedestal, it is first necessary to divide the total height into 19 equal parts; the 3 upper divisions give the height of the entablature, the 4 lower ones that of the pedestal, and the 12 intermediate parts will make exactly that of the column. To find the module, divide, as in the portico without pedestal, the height of the column into 14 parts; one of these divisions will be the module. Then, using the measures indicated in the drawings, it will be easy to draw this portico, as it is seen that the arcade is again twice as high as wide. Although the measures indicated by Vignola for the thickness of the piers give them a good proportion, one is, however, free to modify them according to need, calculating in a manner to make them support, without danger, the weight with which they may be charged. It will be noticed, also, that in this portico the columns are engaged a third of their diameter.

In order that we may understand what is meant by a section, the elevations of the Tuscan porticos with or without pedestals are shown with sections taken on the axis of the arcades. They will be repeated for the five orders. For interiors one should conform to the construction and materials which are used. The Tuscan order being simple, it is well to design the interiors with the same simplicity.



PLATE 6

TUSCAN PEDESTAL AND BASE

The Tuscan order is plain and strong. Its principal characteristic is strength. It does not permit of any ornamentation except rustication.

Although, with the Tuscan order, it is not customary to use a pedestal,* Vignola has thought it necessary to include it here, in order not to depart from the uniform arrangement proposed for his work. He gives to the pedestal $\frac{1}{3}$ of the height of the column, making 4 modules and 8 parts for its height, including the base and the cornice, which are each $\frac{1}{2}$ module in height. The die or dado of the pedestal is $3\frac{2}{3}$ modules in height, and its width is the same as that of the plinth of the base, which is 2 modules and 9 parts. The height of the base of the column is 1 module, which, divided into 2 equal parts, gives one to the plinth and the other to the torus with the cincture, of which latter the height is 1 part. In this order the cincture or listel (C) is not comprised in the height of the shaft. It will be observed that the module is determined by the diameter of the column, which is always 2 modules. The module is divided into 12 parts or minutes for the Tuscan order.

GLOSSARY

Base. Base.
Congé. Conge or apophyge.
Corniche. Cornice.
Coupe de la, etc. Section of the, etc.
Dé ou tronc. Die or dado.
Diametre. Diameter.
Elevation de la, etc. Elevation of the, etc.
Filet ou listel. Fillet.
Fut. Shaft.
Hauteur du, etc. Height of, etc.
Indications des figures. Explanation of the figures.

Listle ou ceinture. Listel on cincture.
Noms de chacun des membres, etc. Names of each of the members of mouldings composing the base and the pedestal of the Tuscan order.
Plan de la, etc. Plan of the, etc.
Profil de la, etc. Profile of the, etc.
Reglet ou listel. Listel.
Socle. Plinth.
Socle de la base. Plinth of the base.
Talon. Heel moulding or ogee.
Tore. Torus.

*Palladio substitutes a high plinth for a pedestal in his Tuscan order. Scamozzi makes his Tuscan Pedestal $\frac{1}{4}$ the height of the column, with base and capital less $\frac{1}{2}$ a diameter.

PLATE 7

ENTABLATURE AND CAPITAL OF THE TUSCAN ORDER

The Tuscan entablature is $\frac{1}{4}$ the height of the column, which gives it, in consequence, $3\frac{1}{2}$ modules, of which 1 module is for the architrave, 1 module and 2 parts for the frieze, and the rest for the cornice. The section of the cornice shows undercutting of the corona to prevent rain water from running upon other parts of the entablature. The height of the capital is 1 module. The diminuation of the shaft is, in all, 5 parts under the astragal, or $2\frac{1}{2}$ parts on each side. At the foot of the plate is the plan of the Tuscan entablature and capital, intended to make perfectly clear the return of the cornice. Figure 5, which shows the impost and archivolt of the Tuscan arcade* with pedestal, was not made upon measures given by Vignola; it was thought necessary to correct certain parts to give them more grace.

The entablature is divided into three parts; the Architrave, Frieze and Cornice. The Architrave is the lower part of the entablature which rests directly on the capital and serves to carry the upper members. The Frieze is the member which separates the architrave from the cornice. The Cornice is intended to protect the walls from the rain. The capital is used to support the architrave and give a larger bearing on the column for the entablature.

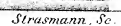
GLOSSARY

Abaque. Abacus.
Architrave. Architrave.
Archivolte. Archivolt.
Baguette.** Astragal.
Ceinture. Cincture or fillet.
Chapiteau. Capital.
Corniche. Cornice.
Coupe de, etc. Section of, etc.
Fillet. Fillet.
Fillet ou anneau. Fillet or ring.
Frise. Frieze.
Fut ou vif. Shaft.
Gorgerin. Neck.
Hauteur de, etc. Height of, etc.
Imposte. Impost.

Imposte pour l'arcade toscane sans pedestal. Impost for the Tuscan arcade, without pedestal.
Indication des figures. Explanation of figures.
Larmier. Corona.
Listel. Listel.
Listeaux. Plural of listel.
Noms de chacun des membres de moulures, etc. Names of each of the members of mouldings, composing the entablature and capital of the Tuscan order.
Plan de, etc. Plan of, etc.
Quart de rond. Quarter round.
Talon. Heel moulding or ogee.

*Arcade, being a term widely and variously used, and having no concise and exact English equivalent, the French will be adhered to throughout these notes. Henri Havard's Dictionary gives an arcade as an opening arranged in masonry, and composed of an arch supported either on columns or on piers, which seems to be the sense in which Vignola has used it. According to Adeline's *Lexique des Termes d'Art*, an arcade is a semi-circular opening following the different forms of the arch. Gwilt's Encyclopedia calls it a series of apertures or recesses with arched ceilings or soffits.

**There is no exact English word for *baguette*, which is a small moulding of the nature of an astragal. When carved it is called a chaplet.



La figure 31me qui donne l'imposte et l'archivolte de l'arcade toscane avec piédestal n'a point été faite avec les mesures données par Vignole, on a pensé devoir les corriger en quelques parties pour leur donner plus de grâce.

PLATE 8

TEMPLE OF THE TUSCAN ORDER

This plate shows the front elevation, plan and longitudinal section of a Tuscan temple in Antis. In the center of the wall which separates the portico from the large hall is a door with a molded frame or architrave. The details of the pediment will be found on the following plates.

GLOSSARY

- | | |
|---------------------------------|--------------------------|
| Antes. Antis. | Grand Salle. Large Hall. |
| Assises. Stone Courses. | Marches. Steps. |
| Chambranle. Architrave or frame | Plinthe. Plinth. |
| (plain or moulded). | Portique. Portico. |

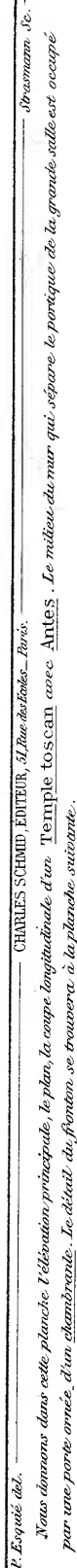
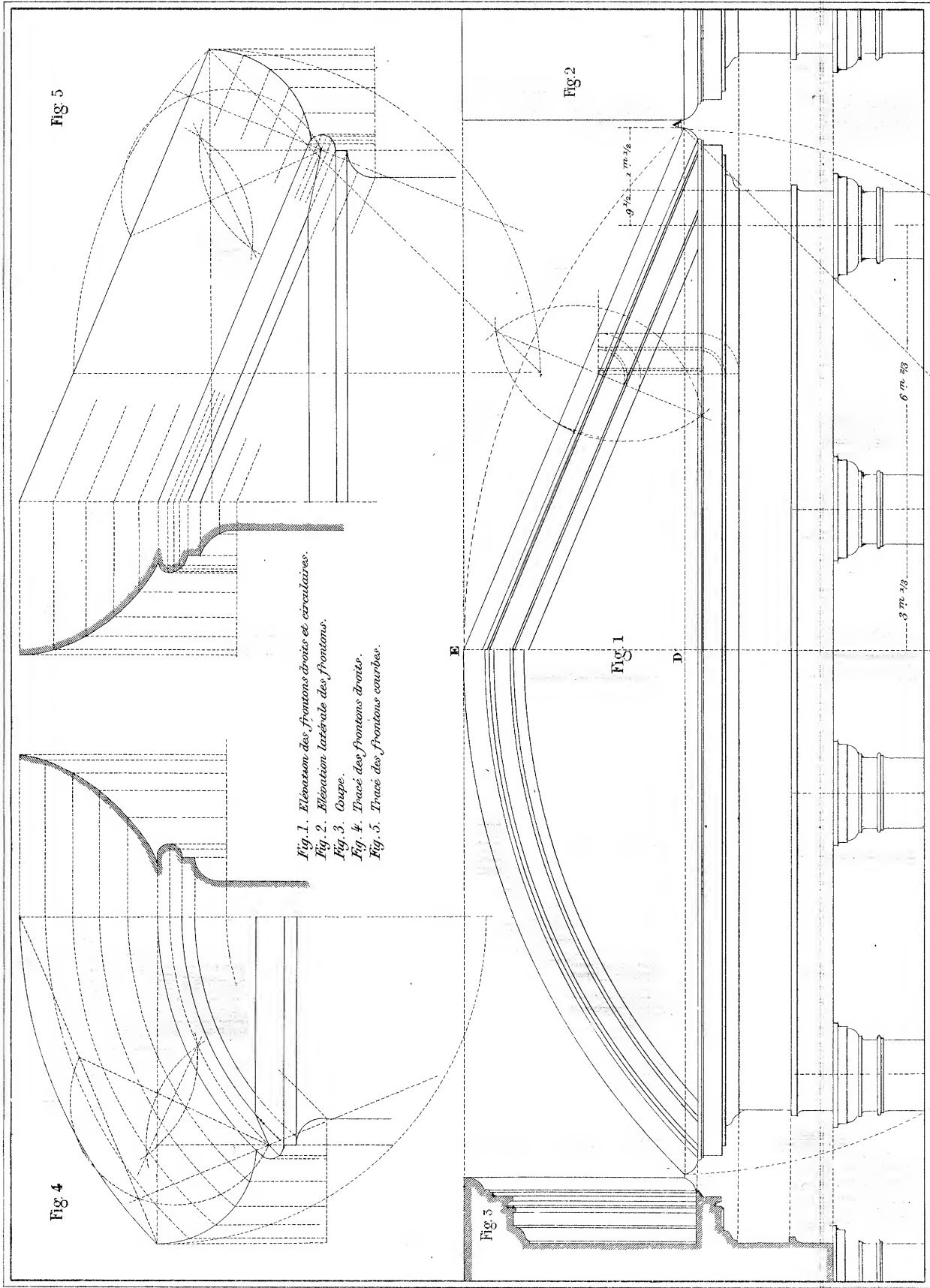


PLATE 9

DRAWING AND STUDY OF PEDIMENTS OF THE TUSCAN ORDER

A pediment is the same as an ornamented or an applied gable. It is well placed, therefore, only where a gable can be used.

The proportion of pediments is difficult to establish for they vary in antique monuments. We give here the method shown by Serlio, which appears very suitable for the Tuscan and Doric orders. An examination of the figures will suffice to understand their method of construction.



Struemann sc.

CHARLES SCHMID, ÉDITEUR, 51, Rue des Ecoles, Paris

Un fronton n'est autre chose qu'un pignon orné ou masqué il n'est donc bien placé que là où le pignon excède la proportion des frontons est assez difficile à établir car elle varie dans les édifices antiques. Nous donnons ici le procédé indiqué par Serlio qui nous paraît très convenable pour les ordres Toscan et Dorique. L'inspection des figures suffira pour comprendre les divers tracés.

PLATE 10

DORIC INTERCOLUMNIATION ACCORDING TO VIGNOLA

In drawing the Doric intercolumniation it is necessary to divide the total height into 5 parts, 1 for the entablature and 4 for the column, or as Vignola says, "To divide the height into 20 parts, of which 1 will be the module." The module like the Tuscan is divided into 12 parts. The column will be 16 modules or 8 times its greatest diameter. One module for the base, 1 module for the capital and the remaining 14 modules for the height of the shaft. The entablature has 4 modules, of which 1 module is for the architrave, $1\frac{1}{2}$ modules for the frieze and $1\frac{1}{2}$ modules for the cornice. The total of these parts gives 20 modules, which is the usual height for the order.

In the frieze the triglyphs are always exactly over the axis of the columns. They are 1 module in width. The metopes are square, $1\frac{1}{2}$ modules each way. They may be decorated with divers ornaments, such as heads of oxen, armor, paterae*, etc. The Doric intercolumniation is always determined by the number of triglyphs. The column has 20 flutes. The entasis of the shaft is drawn the same as for the Tuscan order.

*Paterae, plural of patera (Lat.) a sacrificial vessel used by the Romans to hold the blood of victims. It became a very common feature of ornamentation in friezes and fasciae. It will be recognized in Roman remains as a shallow circular vase usually accompanied by festoons.

PLATE 11

DORIC PORTICO WITHOUT PEDESTAL

In making the Doric portico without pedestal it is always necessary to divide the height into 5 parts, of which one will be for the entablature and 4 for the column; or better divide the total height into 20 parts, of which 1 will be the module.

Place the axes of the column 10 modules apart, and place the piers 7 modules apart for the width of the arcade, and 3 modules for the piers. In this way an exact division for the triglyphs and metopes will be obtained.

The arcade will be in height twice its width. It will be observed that the column projects $\frac{1}{3}$ of a module more than $\frac{1}{2}$ its diameter, so that the projection of the imposts which is also $\frac{1}{3}$ of a module, shall not protrude beyond the $\frac{1}{2}$ column, or encroach disagreeably upon the columns.



PLATE 12

DORIC PORTICO WITH PEDESTAL

The Doric portico is used in general for all large openings. Examples of it are found in the facades of city gates or public buildings.

It will be noticed that the columns in this arrangement of the order are almost entirely accessory and decorative because of their wide spacing.

Vignola says: It is necessary, if you wish to construct a decorated portico or loggia in the Doric order with pedestals, to divide the total height into $25 \frac{1}{3}$ parts, and to make one of these the module, then to give 10 modules to the distance from one pier to the other and 5 modules to each pier. These measures are necessary in order to have in the entablature the right distribution of triglyphs and metopes. The arcade will have by this means the proportion of double its width in height, which is 20 modules.

Notwithstanding the $2\frac{1}{2}$ modules which we have indicated in our drawing as the thickness of the pier, that measurement should be determined by the architect who uses this arrangement, as the piers should have a thickness proportioned to the weight which they carry and the thrust of the arches. The details for this order will be given in the following plates.



PLATE 13

PEDESTAL AND BASE OF THE GOTHIC ORDER

The module of this order is divided, as for the Tuscan order, into 12 parts or minutes. The pedestal is also 5 modules and 4 parts high, which is $\frac{1}{3}$ of the height of the column. The base of the column occupies 1 module; a baguette of 1 part is taken from the height of the torus, rendering this base more elegant and lighter than that of the Tuscan order. Doric columns may be made with or without flutes. To obtain the flutes, divide the circumference of the column into 20 equal parts, which serve as bases for as many equilateral triangles, of which the summit *a* is the center of a portion of a circle *b c*, as shown in figure F. If it is desired to make the flutes more pronounced, it is necessary to join the points *b* and *c* (Fig. E) by a right line, erect the perpendicular *a d*, draw the half-circle *b d c*, and the point *d* will be the center of another arc of a circle, which makes the flutes deeper.

The section of the pedestal shows the undercutting of the corona, which is called **coupe larmes**, because it has for an object the stopping of rain water, which without this device would quickly impair the outer parts of the pedestal.

GLOSSARY

Annelet orle ou ceinture. Cincture or fillet.

Baton ou baguette. Astragal.

Congé. Conge or apophyge.

Congé inférieure. Lower conge or apophyge.

Coupe larmes. Drip.

Dé ou dex. Die.

Filet ou listel. Fillet or listel

Fut ou vif. Shaft of the column.

Gouttière. Pedestal cap.

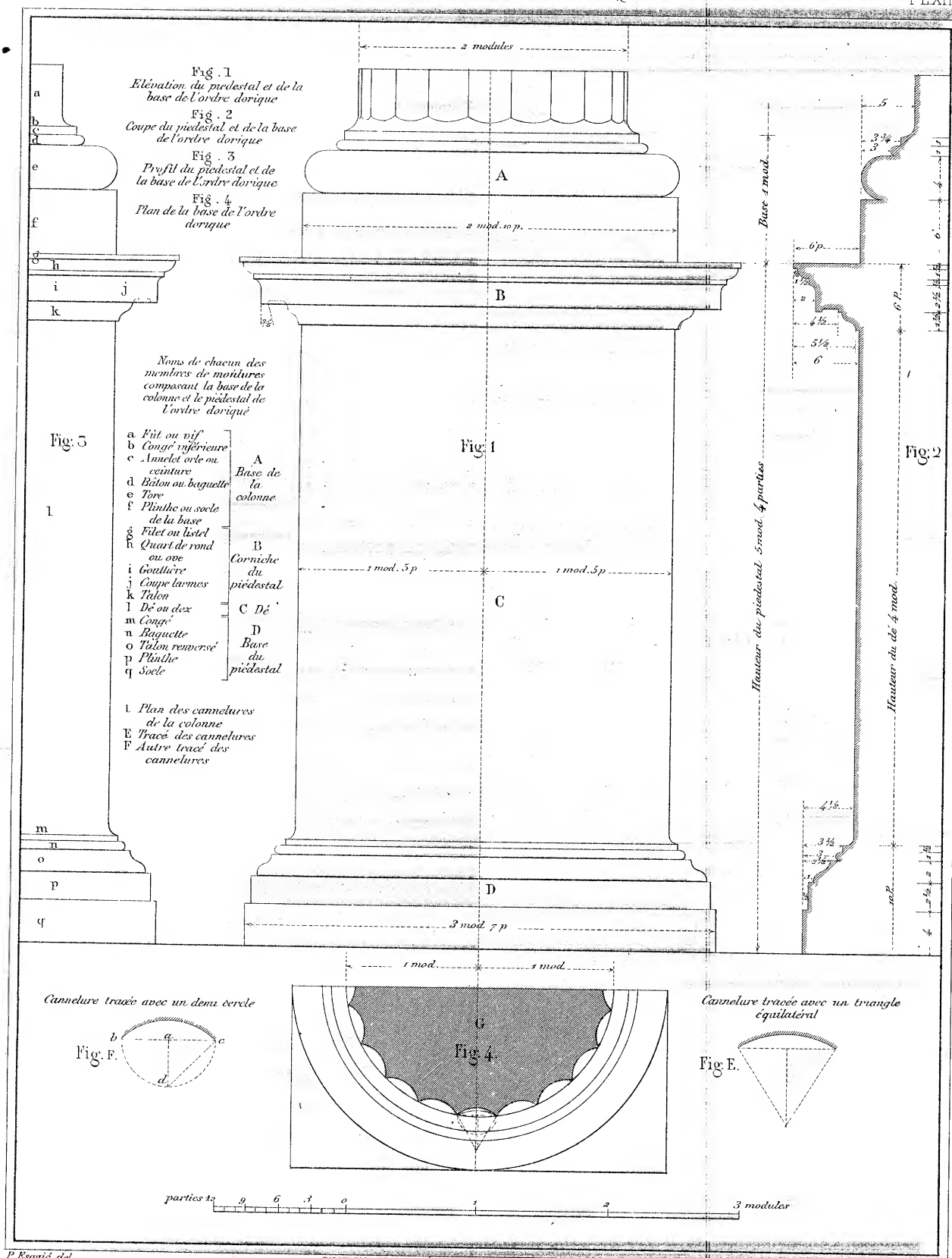
Plinthe ou socle. Plinth or base.
de la base.

Quart de rond. Quarter round or egg.

Talon. Heel moulding or ogee.

Talon renversé. Inverted cyma.

Tore. Torus.



P. Esquié, del.

(CHARLES SCHMID, ÉDITEUR, 51, rue des Ecoles - Paris.)

Strasman, sc.

Comme pour l'ordre Toscan le module se divise en 12 parties ou minutes, le piédestal a de même 5 modules 4 parties qui est le $\frac{1}{3}$ de la hauteur de la colonne, la base de la colonne a un module, une baguette de 1 partie est prise sur la hauteur du tore ce qui rend cette base plus élégante et plus légère que celle de l'ordre Toscan, on peut faire les colonnes Doriques avec ou sans cannelures, pour obtenir les cannelures on divise la circonférence de la colonne en vingt parties égales qui servent de base à autant de triangles équilatéraux dont le sommet a est le centre d'une portion de cercle b c, comme on le voit dans la figure F. - si on veut faire les cannelures plus prononcées il faut (Fig. E.) joindre les points b c par une droite, élever la perpendiculaire a d, tracer le demi cercle b d c et le point d sera le centre d'une autre portion de cercles qui donne des cannelures plus profondes.

La coupe du piédestal indique le refoulement fait sous le larmier et que l'on appelle coupe larmes parcequ'il a pour objet d'arrêter les eaux pluviales, qui sans ce moyen, pourraient dégrader promptement les autres parties de ce piédestal.

PLATE 14

ENTABLATURE AND CAPITAL OF THE DENTICULAR DORIC ORDER

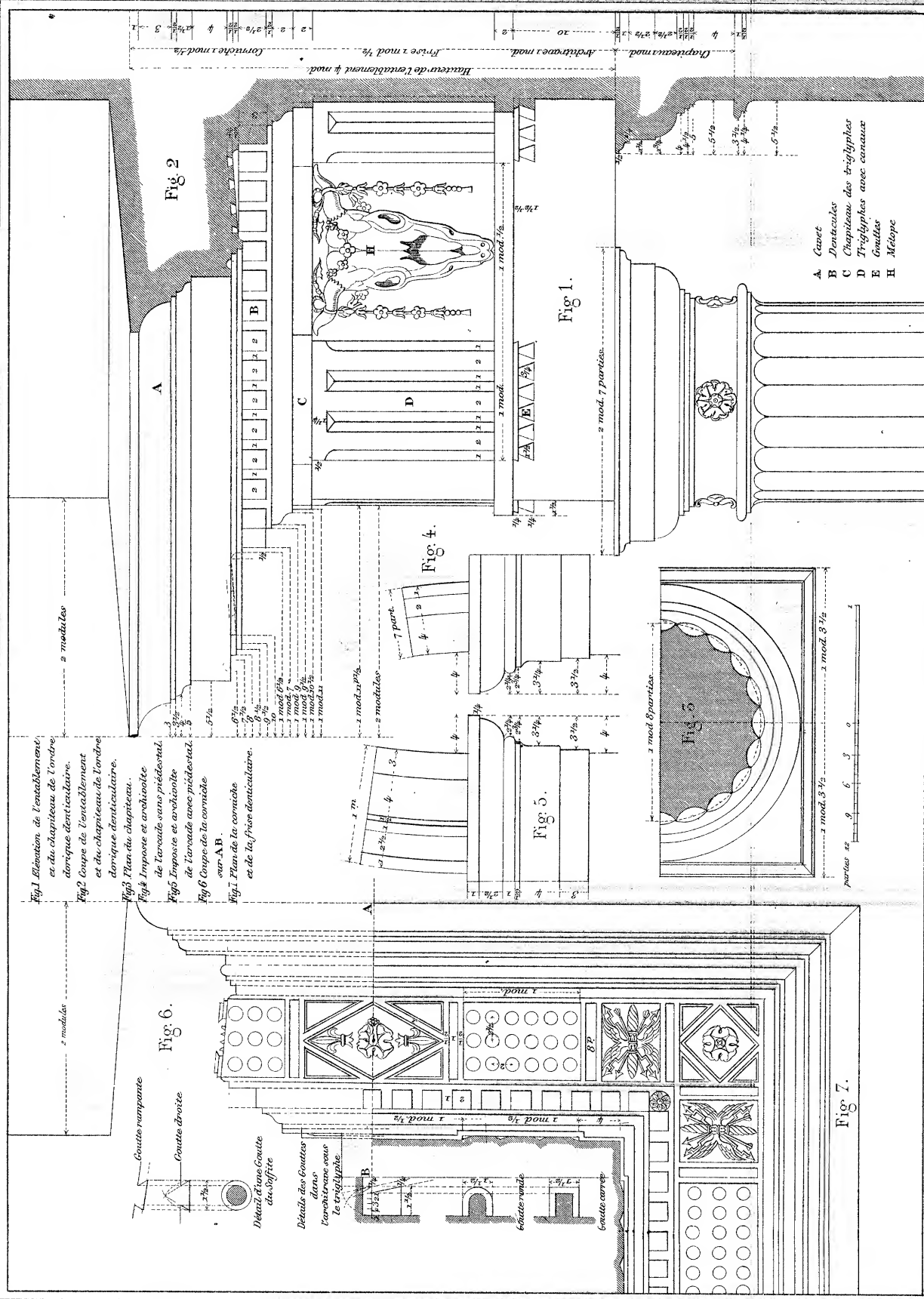
This plate gives several details of the denticular Doric order. The entablature is $\frac{1}{4}$ of the height of the column, the capital 1 module in height, each triglyph is one module wide. The hollowed spaces in them are called channels.

The channels serve the purpose of accentuating the function of the triglyph, which is to carry the cornice. The metope is a space for ornament and should always be square. They can be adorned with heads of animals, trophies of arms, etc. This order is generally used for the rez-de-chaussées.* (Ground floors.)

GLOSSARY

Cavet. Cavetto.	Gouttes. Drops.
Chapiteau des triglyphes. Capitals of the triglyphes.	Métope. Metope.
Denticules. Denticils.	Triplyphes avec canaux. Triglyphes with channels.

*The French designate the stories of their buildings in the following way, beginning with the level of the street, and going upwards: rez-de-chaussee, from rez (Old Fr.), level and chaussée, way or road; entresol, corresponding to our second story, but usually low-studded and inferior, a result of the scheme upon which most city buildings in France are arranged. Then, first, second and third, etc., corresponding to our third, fourth, fifth, etc., stories.



P. Esquieu, del.

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Cette planche donne les divers détails de l'ordre dorique denticulaire. L'entablement a le quart de la hauteur de la colonne, le chapiteau un module de hauteur, chaque triglyphe a un module de largeur, les espaces excisés dans les s'appellent canaux. Les canaux ont pour but d'accentuer la fonction du triglyphe qui est de porter la corniche, la métope étant un remplissage. Les métopes doivent toujours être carrées, elles peuvent être ornées de têtes d'animaux, de trophées d'armes, - etc. Cet ordre est généralement employé dans les rez-de-chaussée.

PLATE 15

ENTABLATURE AND CAPITAL OF THE MUTULAR DORIC ORDER

This order differs somewhat from the preceding one. In the cornice the cavetto is replaced by a cyma recta and the ogee by a quarter round. The mutules, which do not occur in the denticular order, give greater solidity to the cornice and add to its richness. The architrave has two faces instead of one and the capital permits different ornaments on its mouldings.

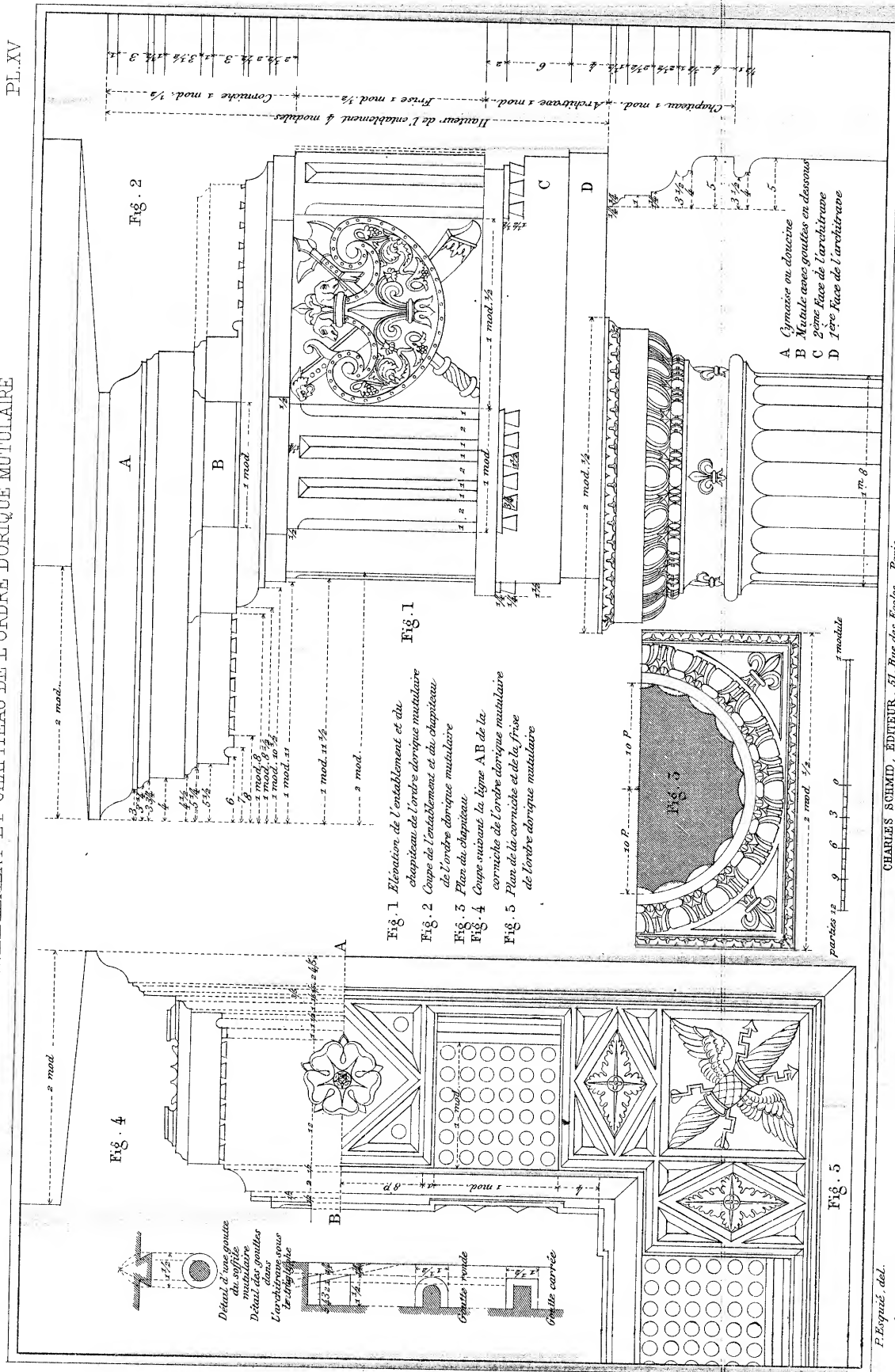
The mutular Doric order, richer than the denticular, is most generally used in monumental or private structures.

GLOSSARY

Cymaise ou doucine*. Cymatium 2 ème Face de l'architrave. Second
or cyma recta. face of Architrave.
Mutule avec gouttes en dessous. 1 ère Face de l'architrave. First
Mutule with drops underneath. face of Architrave.

*Cymaise (Fr.) cymatium (Gr.) is by most authorities used for cyma recta or doucine (Fr.). Gwilt used it also for that part of the cornice which comprises the quarter-round, astragal, and fillet. The following cuts will make clear all the names of this set of mouldings and their opposites:





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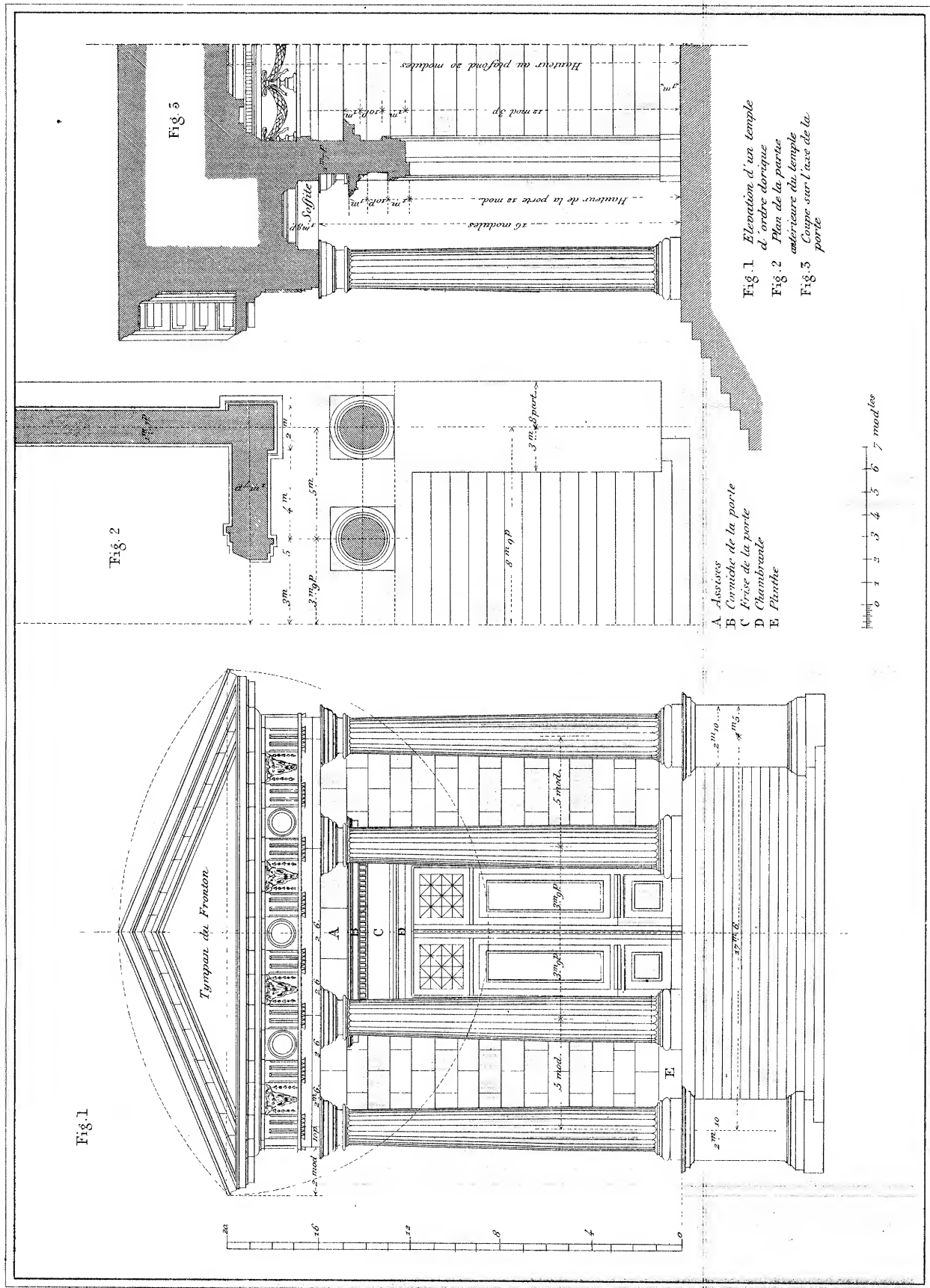
PLATE 16

TEMPLE OF THE DORIC ORDER

This plate represents a mutular Doric portico of three intercolumniations. The intercolumniation is determined by the number of triglyphs. The maximum should not exceed three triglyphs between columns. For the drawing of the pediment, refer to the plate following.

GLOSSARY

Assises. Stone courses.	Frise de la porte. Frieze of the
Chambrane. Frame or architrave	door.
Corniche de la porte. Cornice of	Plinthe. Plinth.
the door.	



P. Esquié, del.

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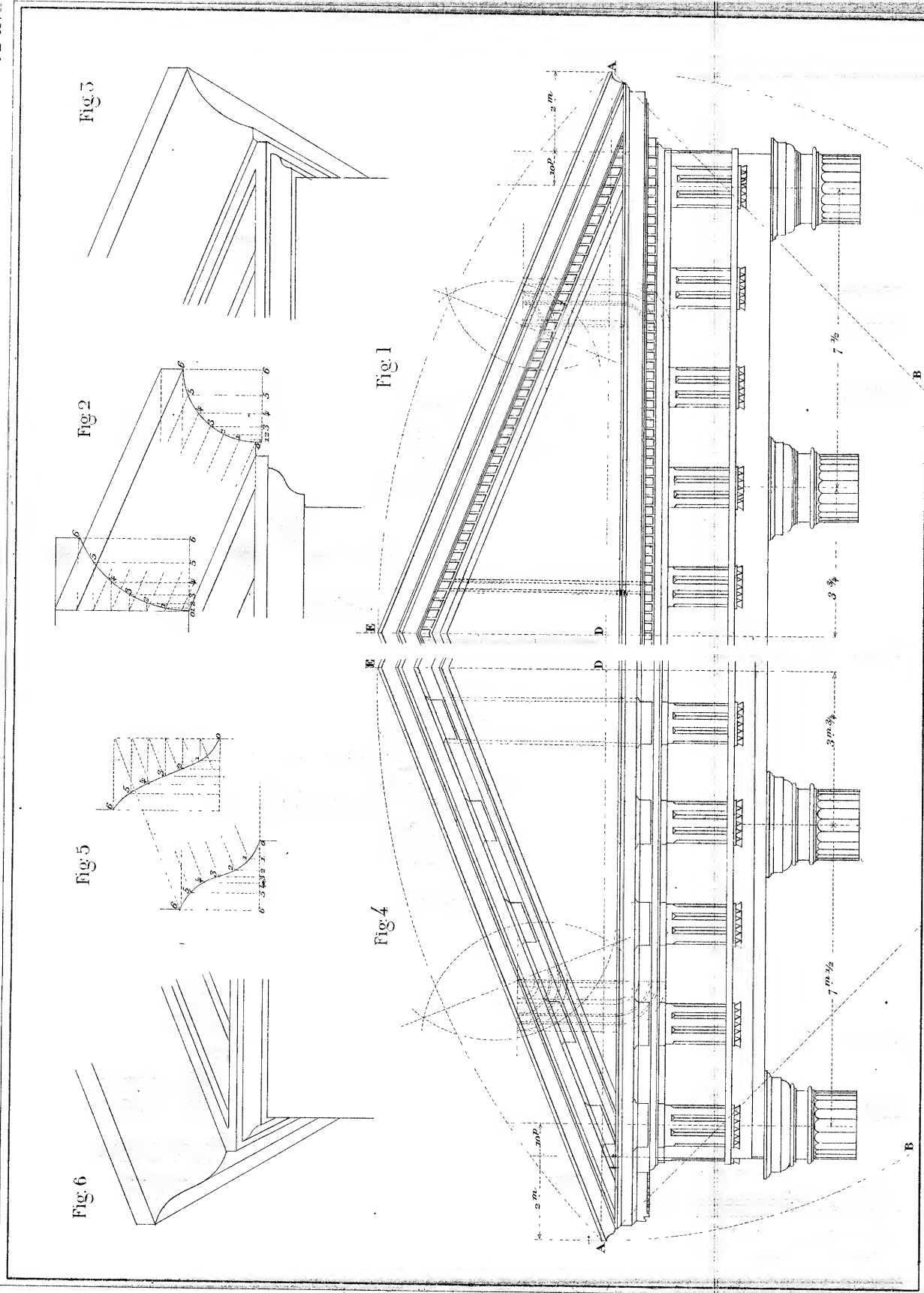
Cette planche représente un portique Dorique Mutilaire de trois entablementements. L'entablement est déterminé par le nombre des triglyphes. Le maximum ne doit pas dépasser trois entre-triglyphes. — Pour le tracé du Fronton, on se reportera à la planche suivante.

Stemann, Sc.

PLATE 17

DRAWING AND STUDY OF PEDIMENTS OF THE DORIC ORDER

The drawing used follows the same principles as those shown for the Tuscan order. An examination of this plate will be sufficient for the students to understand the drawing of the inclined mouldings. Figure 1 represents the pediment of the denticular Doric. Fig. 2 and 3 show the joining with the inclined mouldings. It will be noticed that the cavetto has a small horizontal part which is impossible to avoid. Fig. 4 represents the mutular Doric pediment, Fig. 5 and 6 the joining of the inclined and horizontal mouldings as well as the exact form of the cyma recta at the top of the pediment.



P. Enquie, del.

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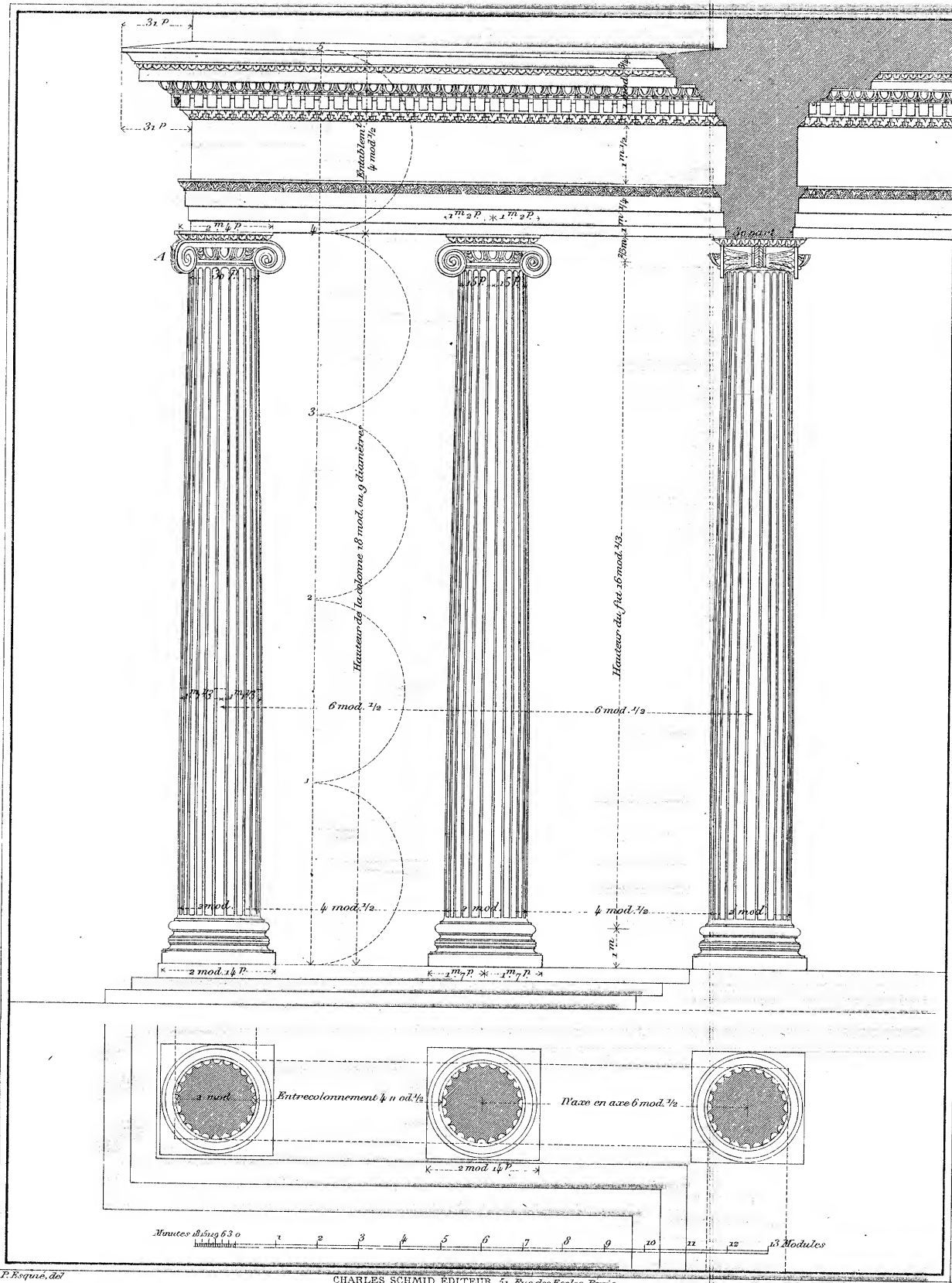
Le tracé adopté provient des mêmes principes que ceux indiqués pour l'ordre Dorique. Toutefois, l'inspection de cette planche suffira aux élèves pour comprendre le tracé des montures rampantes. La fig. 1 représente le fronton du doric dorique, les 2^e et 3^e font voir le raccord avec les montures rampantes; on remarquera que le cavalet a une petite partie horizontale qu'il est impossible d'éviter, la figure 4 représente le fronton du doric mu-tuel, les 5^e et 6^e les raccords des montures rampantes et horizontales, ainsi que la forme exacte de la ducane au sommet du fronton.

PLATE 18

IONIC INTERCOLUMNIATION

The Ionic intercolumniation is made in the same way as the Tuscan and Doric, by dividing the total height of the order into 5 parts, of which the 4 lower parts form the height of the column. That height is divided into 18 parts, which gives the module; the module of this order is divided into 18 parts or minutes for the divers mouldings which compose the order. This division is made necessary by the mouldings, which are more numerous and much more delicate in this than in the two preceding orders. This order is generally used in interiors because of its elegance, or exteriorly in the second* stories of edifices. The ancients have used it in many temples. A beautiful example of this order may be seen at Rome, in the temple of Fortuna Virilis. It will be noticed that the capital at the corner A returns upon the two facades in such a way that one always sees the volutes.

*Second etages—literally, second stories—corresponds to our third or fourth stories, according as the building has or has not an entresol. See note on plate 14.



L'entrecroisement. Lorsque se fait de même que les entrecroisements toscans et doriques, en divisant la hauteur totale de l'ordre en 5 parties dont les 4 inférieures forment la hauteur de la colonne, on divise cette hauteur en 18 parties ce qui donnera le module, le module de cet ordre se divise en dix-huit parties ou minutes pour les diverses moulures qui composent cet ordre, on a besoin de cette division du module en 18 parties à cause des moulures qui sont plus nombreuses dans cet ordre qui est beaucoup plus délicat que les deux ordres précédents, il s'emploie ordinairement dans les intérieurs à cause de son élégance ou extérieurement dans les seconds étages des édifices, les anciens l'ont employé dans divers temples un bel exemple de cet ordre se voit à Rome au temple de la Fortune virile, on remarquera que le chapeau d'angle A se retourne sur ses deux faces de sorte que l'on aperçoit toujours les volutes.

PLATE 19

IONIC PORTICO WITHOUT PEDESTAL

The plate which we give here represents an Ionic portico without pedestal.

In drawing this portico the height, as in the preceding plate, is divided into 5 equal parts, the upper part for the entablature and the other 4 parts for the column. The height of the arcade is always twice its width. The columns are engaged $\frac{1}{3}$ of a module in the pier. The Ionic portico may be advantageously used in the second story of palace courts or public monuments which demand a rather ornate decoration.

Students will do well to practice drawing this portico because of the difficulty they will find in forming the volutes at a small scale.

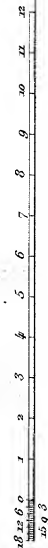


PLATE 20

IONIC PORTICO WITH PEDESTAL

The Ionic portico with pedestal is principally used in large edifices, especially for the first story. Its arrangement is more elegant in its forms than that of the two preceding orders, whose special character indicates strength and stability.

To draw the Ionic portico with pedestal the total height must be divided into $28\frac{1}{2}$ equal parts or modules. The pedestal, base and cornice included, having 6 modules of height, a third of the entire column. Consequently, there will remain $4\frac{1}{2}$ modules for the height of the entablature, according to the rule adopted by Vignola. The width of the piers is 4 modules and the height of the arcade is always twice its width. The section taken on the axis of the arcade shows a barrel vault and penetrations with massive ribs opposite the columns.

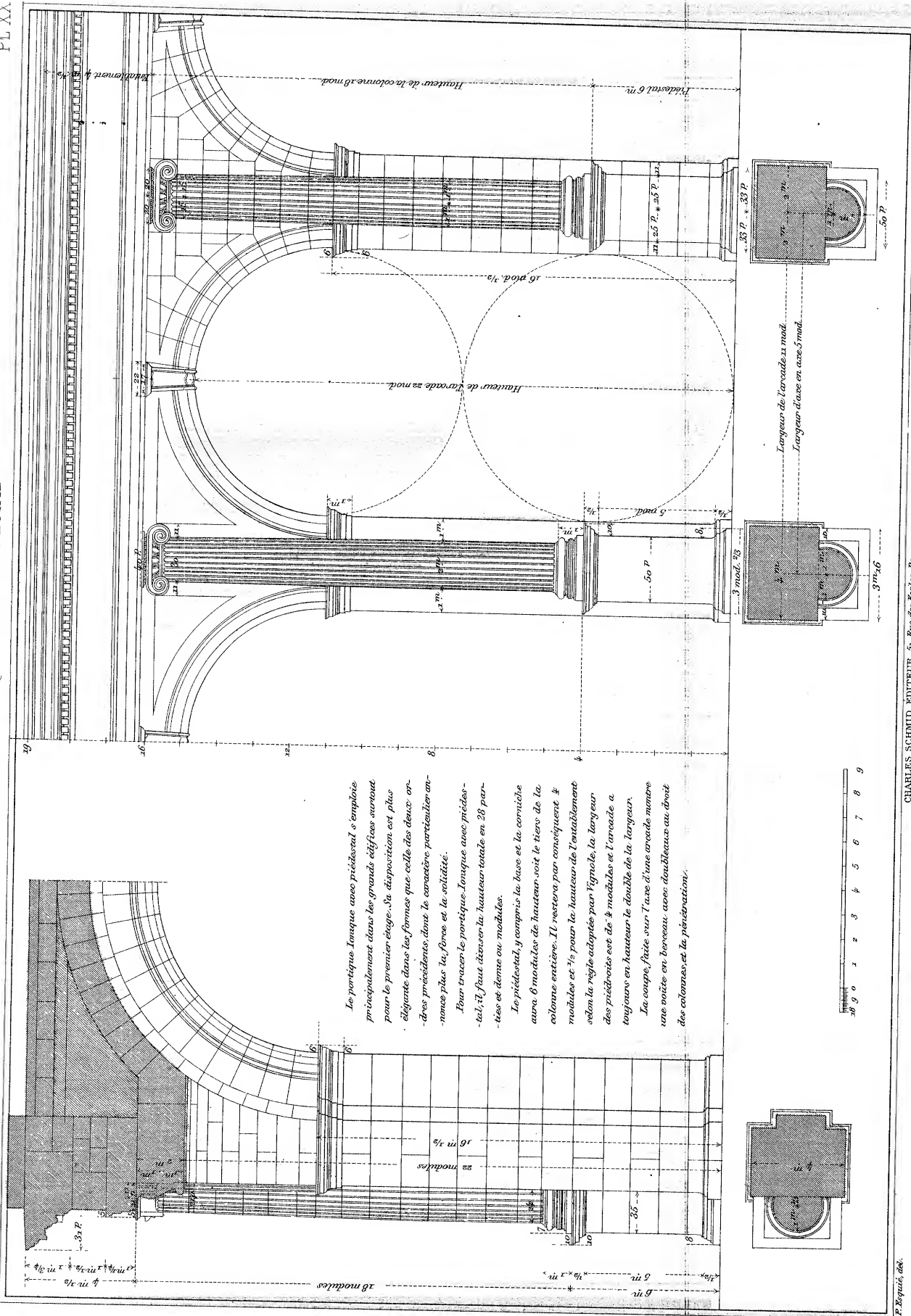


PLATE 21

PEDESTAL AND BASE OF THE IONIC ORDER

The Ionic order, by its form and its decoration, occupies the middle place between the Doric, which represents strength and solidity, and the Corinthian, which is the complete type of elegance and richness. The refined taste of the Greeks required an intermediate between the two systems, one a simple, grave disposition, the other more slender, more rich and more noble.

The Ionic pedestal which is given in this plate is $\frac{1}{3}$ the height of the column, that is to say, 6 modules; its footing and its cornice are each $\frac{1}{2}$ module in height. The die is 5 modules high, the two fillets included. The base given is by Vignola. An example of the attic base, as used by the ancients, is given on a following plate. The base is one module in height not including the listel or cincture. The shaft of the column is ornamented with 24 semi-circular flutes, which end squarely at the beginning of the **congé**. The width of the listels separating the flutes is $\frac{2}{7}$ of the width of the flutes.

GLOSSARY

Baguettes ou Astragales. Astragal.
Cannelure demi-circulaire. Semi-circular flute.
Congé. Conge or apophyge.
Cote de la cannelure. Listel separating the flutes.

Listel. Listel.
Scotie inférieure. Lower scotia.
Scotie supérieure. Upper scotia.
Tore. Torus.

PLATE 22

ENTABLATURE AND CAPITAL WITH CUSHIONS OF THE IONIC ORDER

This plate represents on a large scale the details of the entablature and capital of the Ionic order, as well as the imposts of that order.

The capital given is after the principles established by the corner column of the temple of Fortuna Virilis at Rome. With this special arrangement the capital appears well balanced when it is viewed on the diagonal. The capitals of the intermediate columns are composed with both sides similar to the side A in Fig. 1.

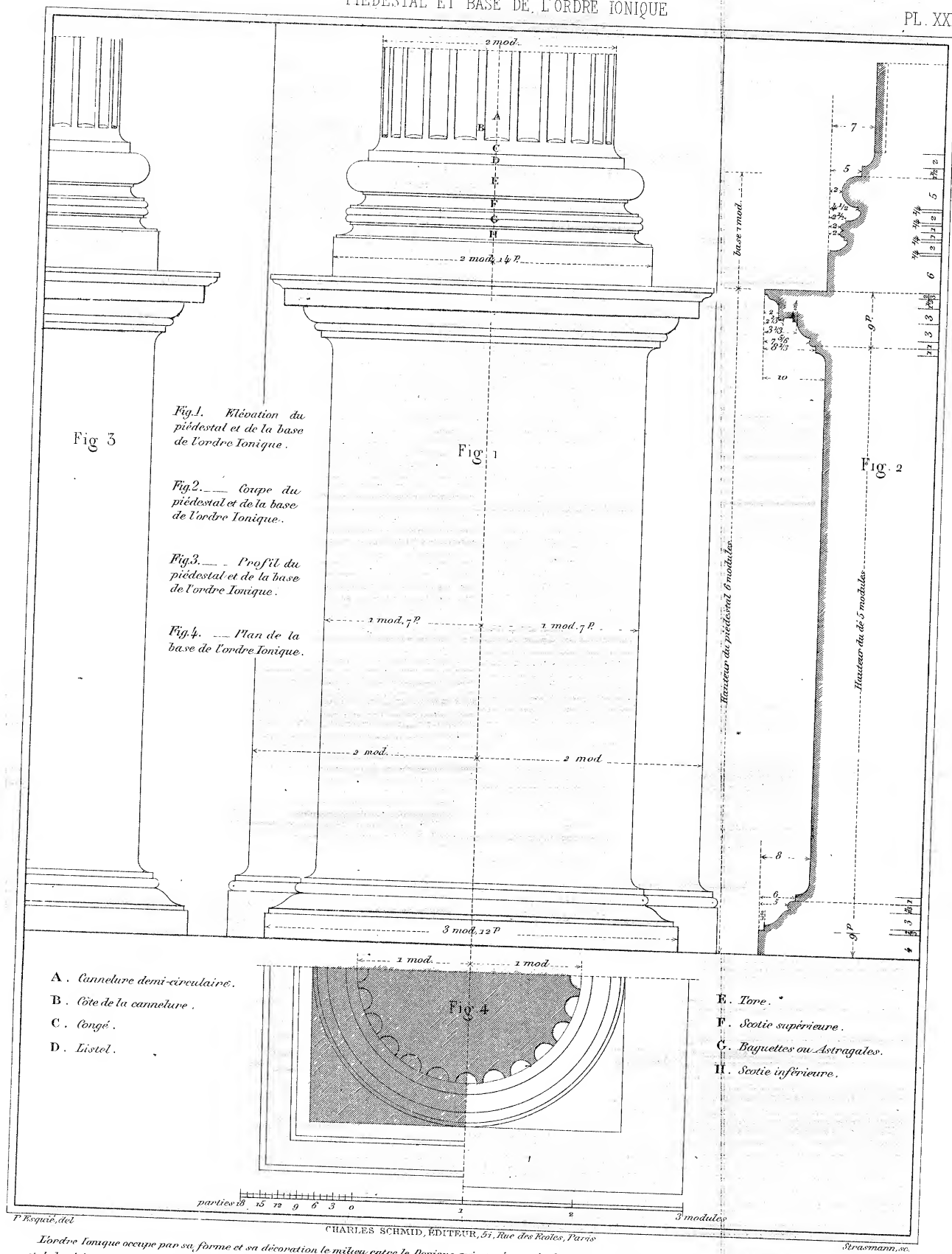
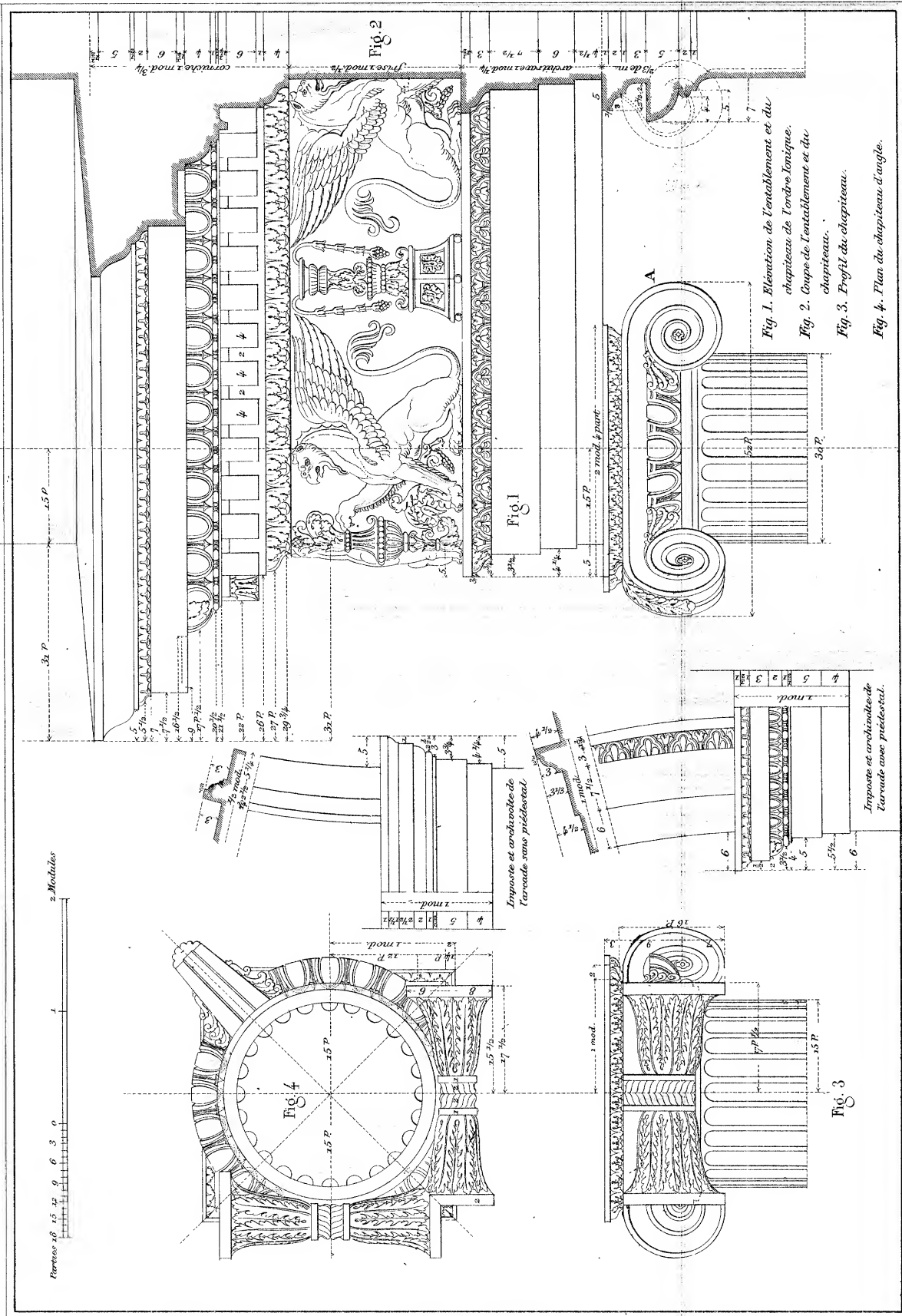


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METHOD OF DRAWING THE VOLUTES OF THE CAPITAL OF THE IONIC ORDER

Two methods for drawing the volute are given. For the first, see Fig. 1. Having drawn the cathetus* of this first volute, and having prolonged the upper line of the astragal which cuts it at right angles in passing through the centre of the eye, one module from the axis of the column, inscribe a square in the eye of the volute as seen in the detail (Fig. A); then pass two diagonals through the centre of the eye, from which the distance to the sides of the square will be divided upon the diagonals into three equal parts, which gives 12 points to serve as centres for each arc, of which the ensemble comprising the three revolutions of the spiral of the volute is composed. Begin by placing the point of the compass at the point 1, and with the distance 1 B as radius, draw the quarter-circle terminating at the horizontal line 1, 2; then place the point of the compass at the point 2, and the other point upon the extremity of the quarter-circle drawn; draw a second, repeat this operation with each of the remaining points of the 12. You will then have the exterior edge or angle of the listel of the volute. To draw the other edge, subdivide each of the three divisions of the diagonals into four equal parts, and from each division nearest to each point already used as a centre, describe twelve other quarter-circles which will form the second spiral of the listel; the dotted lines passing through these points from the centre indicate the termination of the quarter-circles.

Second method: Wishing to make the volute in the way shown at the bottom of this plate, draw the line called **cathète** 16 parts of a module long, of which 9 parts are above and 7 parts below the centre; with the said centre divide the circumference of the eye into 8 parts as shown in the drawing; after that construct the triangle B A C, of which the side B A will be 9 parts of a module, and the side A C, 7 parts; the rest can be easily understood from the drawing marked with numbers, which will suffice to show how to form it; then there only remains to bring back the points of the line B A upon those which divide the circumference of the eye, as is seen by the figures on the drawing. To draw the contour, join 1 and 2 by a line, then erect upon that line a perpendicular, set off upon that perpendicular the distance B A by an arc of a circle, taking the point B as a centre; this new point will be the centre of the arc which joins the points 1 and 2; repeat the same operation for all the others. You can pass a curve through all the points obtained upon the 8 radii, a curve drawn by the hand alone, without using the compass. For the width of the listel, lay off upon the 8 radii the divisions found upon the line A' B' B', and then proceed in the same way.

The cushions Figs. 2 and 3 should be drawn by hand in order to give them more graceful outline, but in order to facilitate the drawing we outline them with a compass.

GLOSSARY

Coupe de la volute sur la ligne.	Section of the volute upon the line.	Module pour la distance de la cathète a l'axe.	Module for the distance from the cathetus to the axis.
Coque des oves.	Egg shell.	Oeil de la volute avec le détail des points de centre.	Eye of the volute with the detail of centre points.
Dards.	Darts.	Oves.	Eggs.
Gousses.	Pods.	Profil du coussinet sur la face latérale.	Profile of the cushion upon the side face.
Ligne perpendiculaire nommée cathète.	Perpendicular line called cathetus.	Volute.	Volute.
Listel de la volute.	Listel of the volute.		

*Cathete—cathetus—let down. Vertical line used in constructing the Ionic volute. See plate.

PLATE 24

ENTABLATURE AND CAPITAL WITH FOUR VOLUTES OF THE
IONIC ORDER

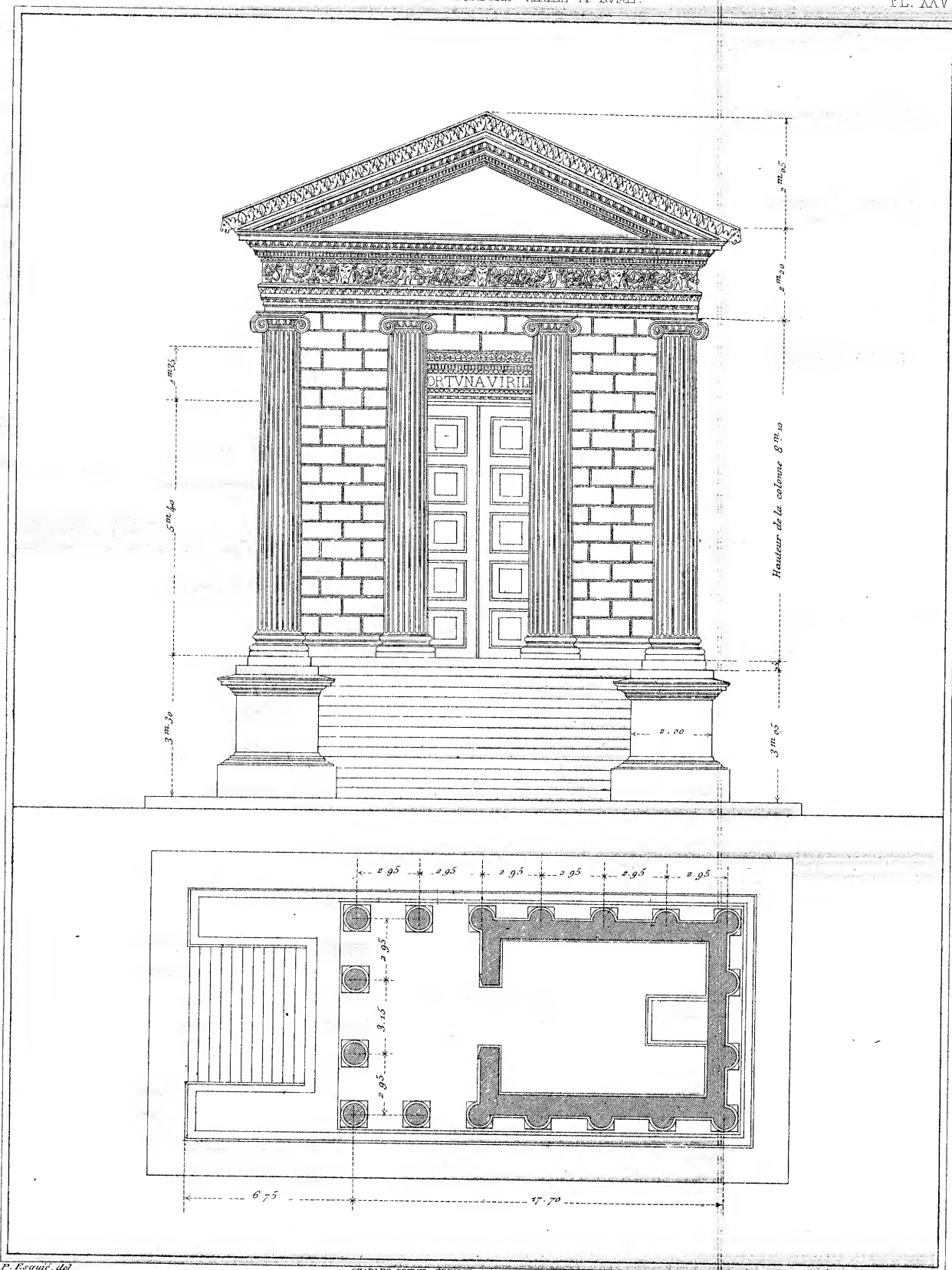
On account of the difficulty which is experienced in arranging the corner Ionic capital in a satisfactory manner, the Ionic order with four volutes without cushions is sometimes used. Vignola does not give this example. The arrangement after the proportions adopted by Scarmozzi is given.

PLATE 25

TEMPLE OF FORTUNA VIRILIS AT ROME

To complete the Ionic order, an example of a temple built by the Romans, who dedicated it to Fortuna Virilis, is given. It is the most beautiful example of this order which has remained to us in so complete a state.* It is placed before the students who are beginning, in order to persuade them, at their very *début* into the art of architecture, never to depart from good traditions and to thoroughly inform themselves of the beauties of antiquity.

*The student should not understand this comparison to include the order of the Erechtheum at Athens, as that is Greek.

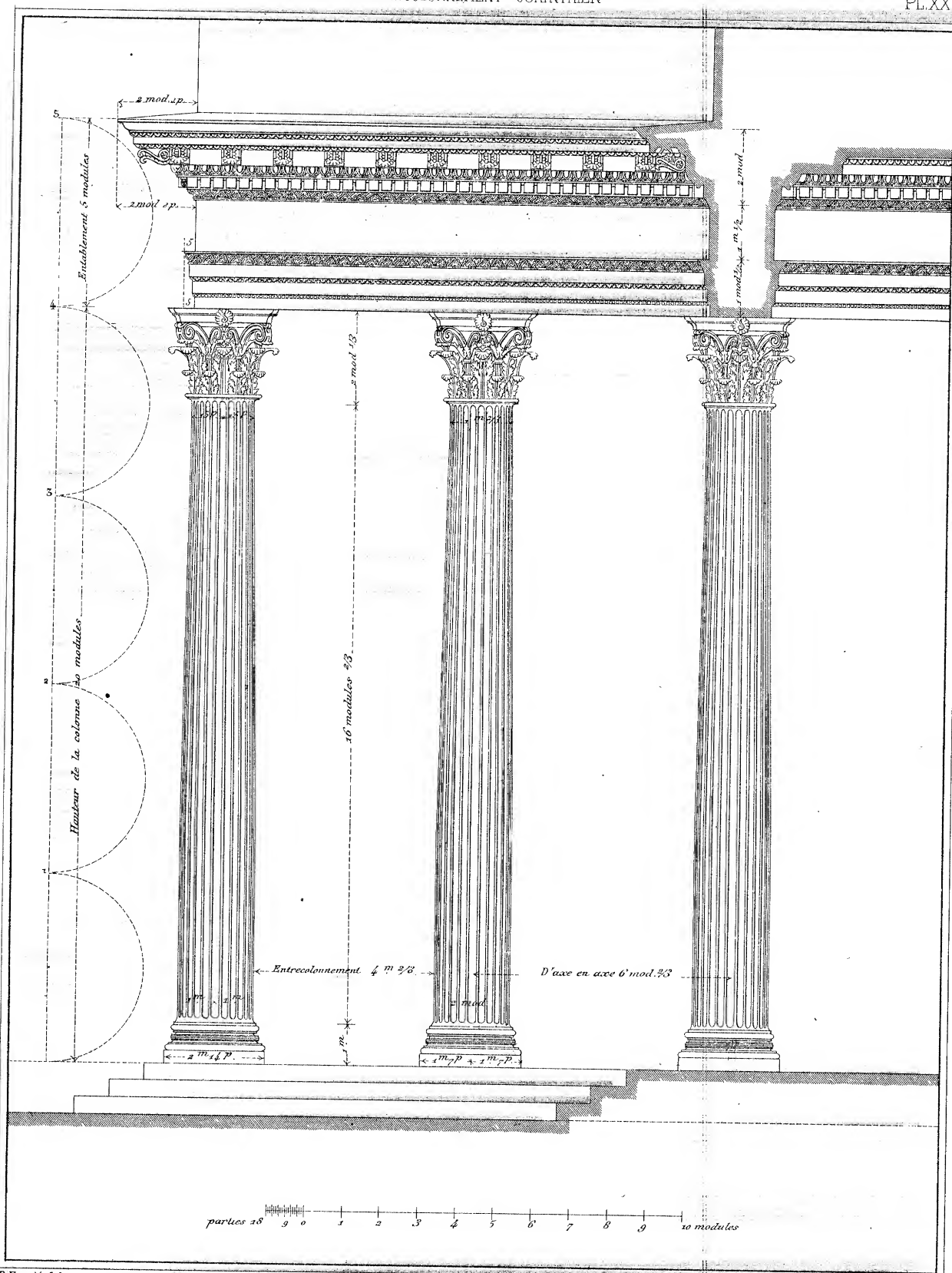


Nous donnons comme complément de l'ordre ionique un exemple d'un temple bâti par les Romains, qui le dédièrent à la fortune virile. C'est le plus bel exemple de cet ordre qui nous soit resté aussi complet. Nous avons cru devoir le placer sous les yeux des élèves qui commencent, afin de les engager des leur début dans l'art de l'architecture, à ne jamais s'écarter des bonnes traditions, et à se bien pénétrer des beautés de l'antiquité.

PLATE 26
CORINTHIAN INTERCOLUMNIATION

To draw the Corinthian intercolumniation the total height is divided into 25 parts, one of which is the module, which is divided into 18 parts or minutes, as in the Ionic order. The width between the columns is fixed by Vignola at $4\frac{1}{2}$ modules, in order to arrange the spacing of modillions in the cornice, and that one will always be found on the axis of each column.

The magnificence of this order, carrying it far above all the others, has caused it to be used principally for great monuments such as temples and palaces.



Pour tracer l'entrecolonnement corinthien on divise la hauteur totale en 25 parties, dont une sera le module, qui se divise aussi en 18 parties ou minutes, comme dans l'ordre ionique. Vignole fixe la largeur entre les colonnes à 4 modules $\frac{2}{3}$, afin d'accorder la division des modillons dans la corniche, et qu'il s'en trouve toujours un sur l'axe de chaque colonne.

Cet ordre l'emportant par sa magnificence sur tous les autres, on l'emploiera principalement pour les grands monuments, tels que les temples et les palais.

PLATE 27

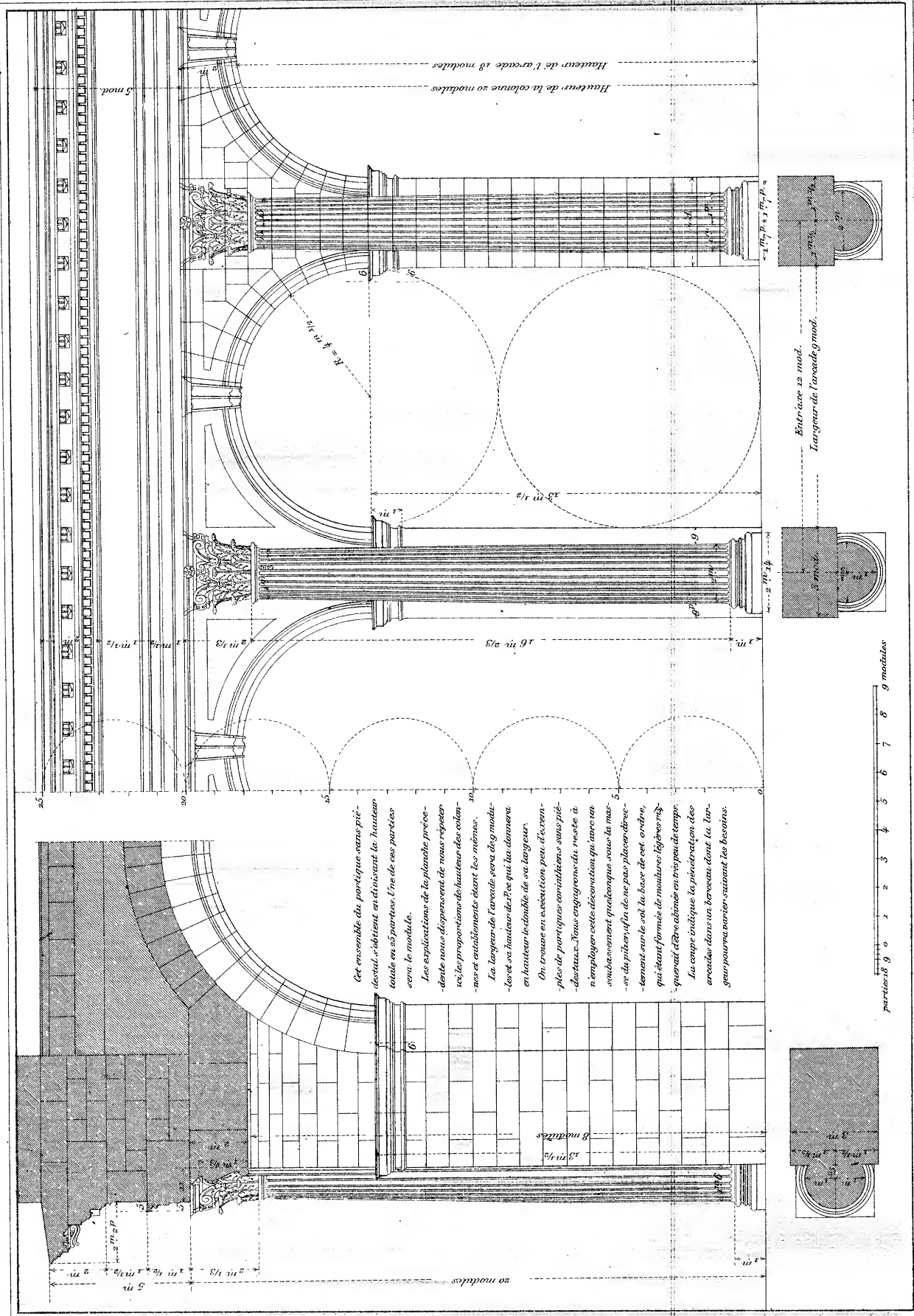
CORINTHIAN PORTICO WITHOUT PEDESTAL

This composition of the portico without pedestal is obtained by dividing the total height into 25 parts. One of these parts will be the module.

The explanations of the preceding plate are dispensed with because the proportions of the height of columns and entablatures are the same. The width of the arcade will be 9 modules and the height 18 modules, which gives a height of twice its width.

There are very few examples of Corinthian porticos without pedestals. It is advisable, moreover, to use this decoration only with some base under the mass of the piers, in order to avoid placing the base of the Corinthian order directly upon the ground, the base being formed of light mouldings would be in danger of being damaged in short time.

The section shows the penetration of the arcade with a vault in which the width can vary according to its uses.



Cet ensemble du portique sans piédestal s'élève en élévation la hauteur totale en 5 parties. L'une de ces parties sera le module.

Les explications de la planche précédente nous dispensent de nous répéter, les proportions de hauteur des colonnes et également étant les mêmes.

La largeur de l'arcade sera cinq modules et sa hauteur de l'axe qui lui donnera en hauteur le double de sa largeur.

On trouve en exécution peu d'exemples de portiques corinthiens sans piédestaux. Nous enregistrons du reste à n'employer cette décoration qu'avec un embellissement quelconque sous la masse du pilon afin de ne pas placer directement sur le sol la base de cet ordre, qui étant formée de moulures légères n'aurait d'être abîmée en très peu de temps.

La coupe indique la pénétration des arcs dans un horizon dont la largeur pourra varier suivant les besoins.

PLATE 28

CORINTHIAN PORTICO WITH PEDESTAL

To draw the Corinthian portico with pedestal, it is necessary to divide the total height into 32 parts, one of which is the module. Give 12 modules to the width of the arcade, 16 modules between the axes of columns and 4 modules to the piers.

This portico is the only one besides that of the composite order where Vignola departs from the exact measure of the arcade, which should be twice as high as wide—this is done to make the order lighter and more slender, and also to give greater height to the keystone and thereby increase its usefulness.

At the side of the elevation is given a section of the axis of the arcade in order that the adjusting of the interior with the exterior may be better understood if it is to be roofed with a groined vault.

The thickness of the pier will vary according to the load and thrust it will have to support.

This order and decoration is used in monuments of great importance and in upper stories.

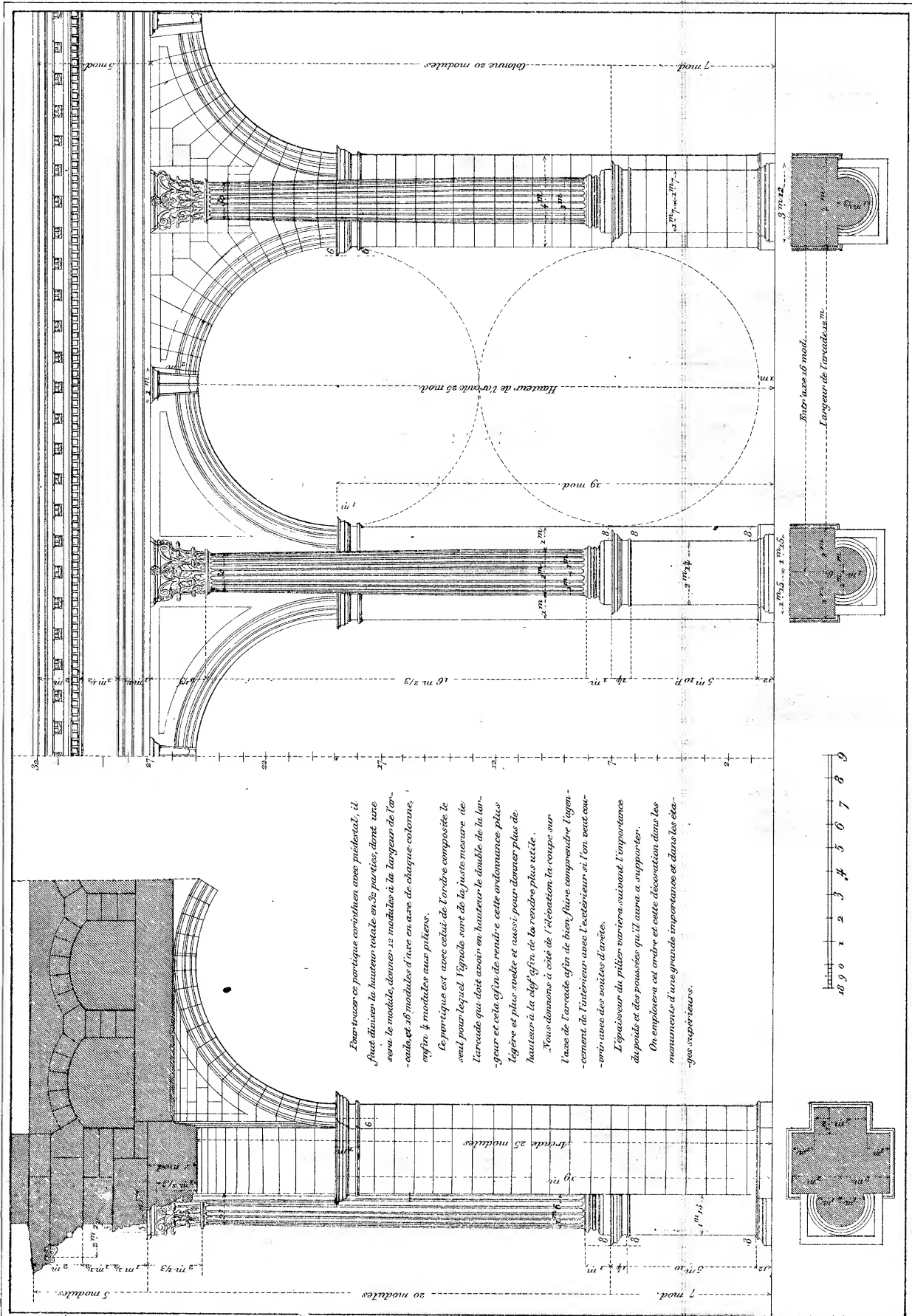


PLATE 29

PEDESTAL AND BASE OF THE CORINTHIAN ORDER

The module of the Corinthian order is divided into 18 parts or minutes. For this order Vignola made an exception to his general rule that the pedestal should always be one-third the height of the column. This gives a graceful proportion to the order.

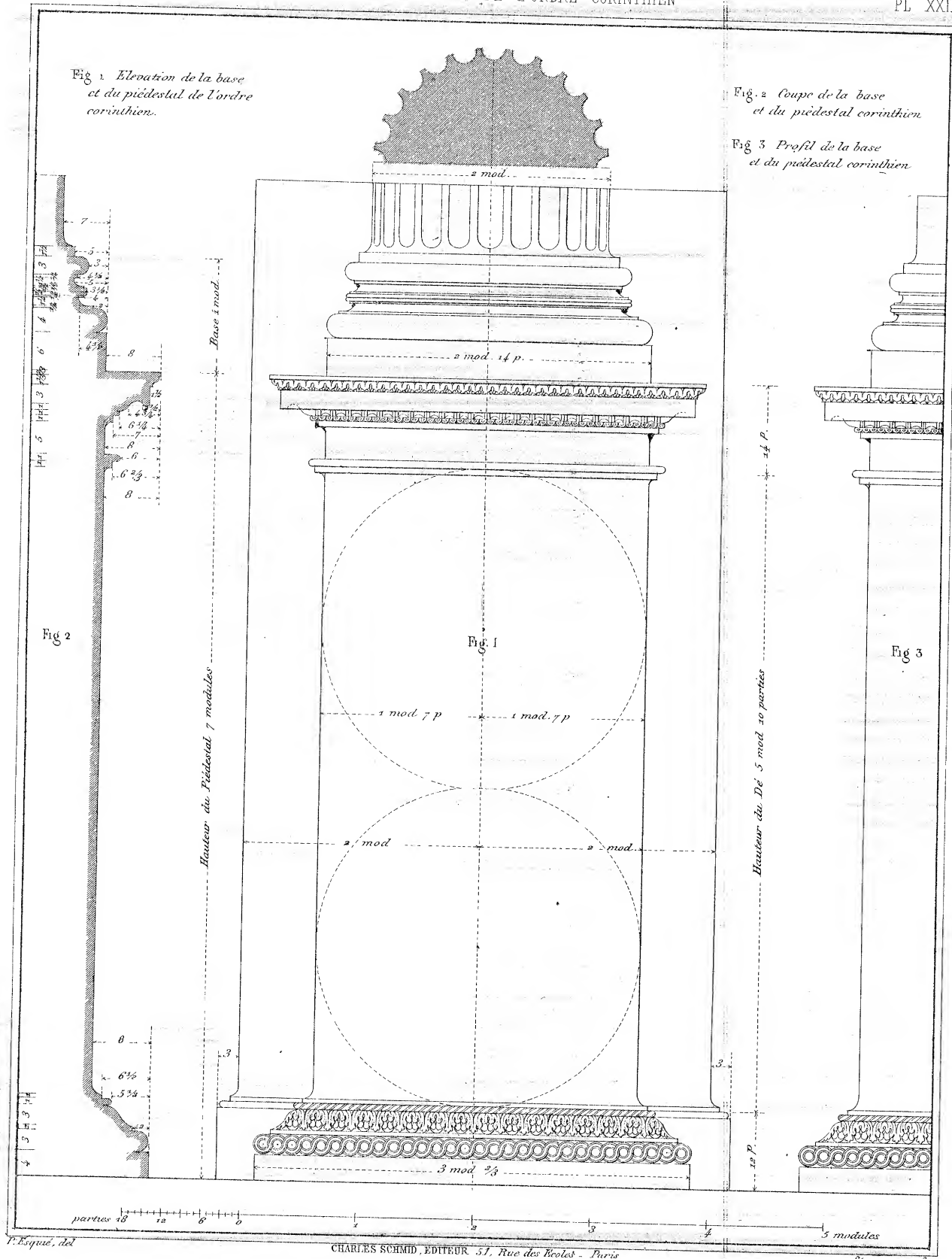
Vignola advises giving 7 modules to its height. In this way the die of the pedestal forms two superimposed squares. However, the plinth of the base of the pedestal may be raised, giving it 8 parts in place of 4. The base drawn is that given by Vignola. The ancients have often substituted for it the base called Attic*, of which the mouldings have a more beautiful proportion.

*Pertaining to Attica, a province of ancient Greece, of which Athens was the metropolis.

Fig. 1. Elevation de la base et du piédestal de l'ordre corinthien.

Fig. 2. Coupe de la base et du piédestal corinthien.

Fig. 3. Profil de la base et du piédestal corinthien.



Le module de l'ordre corinthien se divise en 18 parties ou minutes. Vignole pour cet ordre fait une exception à la règle générale qui veut que le piédestal soit le $\frac{1}{3}$ de la colonne. Afin de lui donner la grâce proportionnelle à l'ordre

Vignole conseille de lui donner 7 modules de hauteur. De cette façon le dé du piédestal forme deux carrés superposés. Toutefois on pourrait donner la plinthe de la base du piédestal et lui donner huit parties au lieu de quatre — La base dessinée est celle donnée par Vignole. Les anciens lui ont substitué quelquefois celle dite attique dont les moulures sont d'une plus belle proportion.

PLATE 30

ENTABLATURE AND CAPITAL OF THE CORINTHIAN ORDER

The height of the entablature is divided into 10 parts, 3 of which belong to the architrave, 3 to the frieze and 4 to the cornice. Directly over each modillion is placed a decorative object or a lion's head.

In antiquity it was by these motives that the rain water was discharged. In our time they only serve as ornaments.

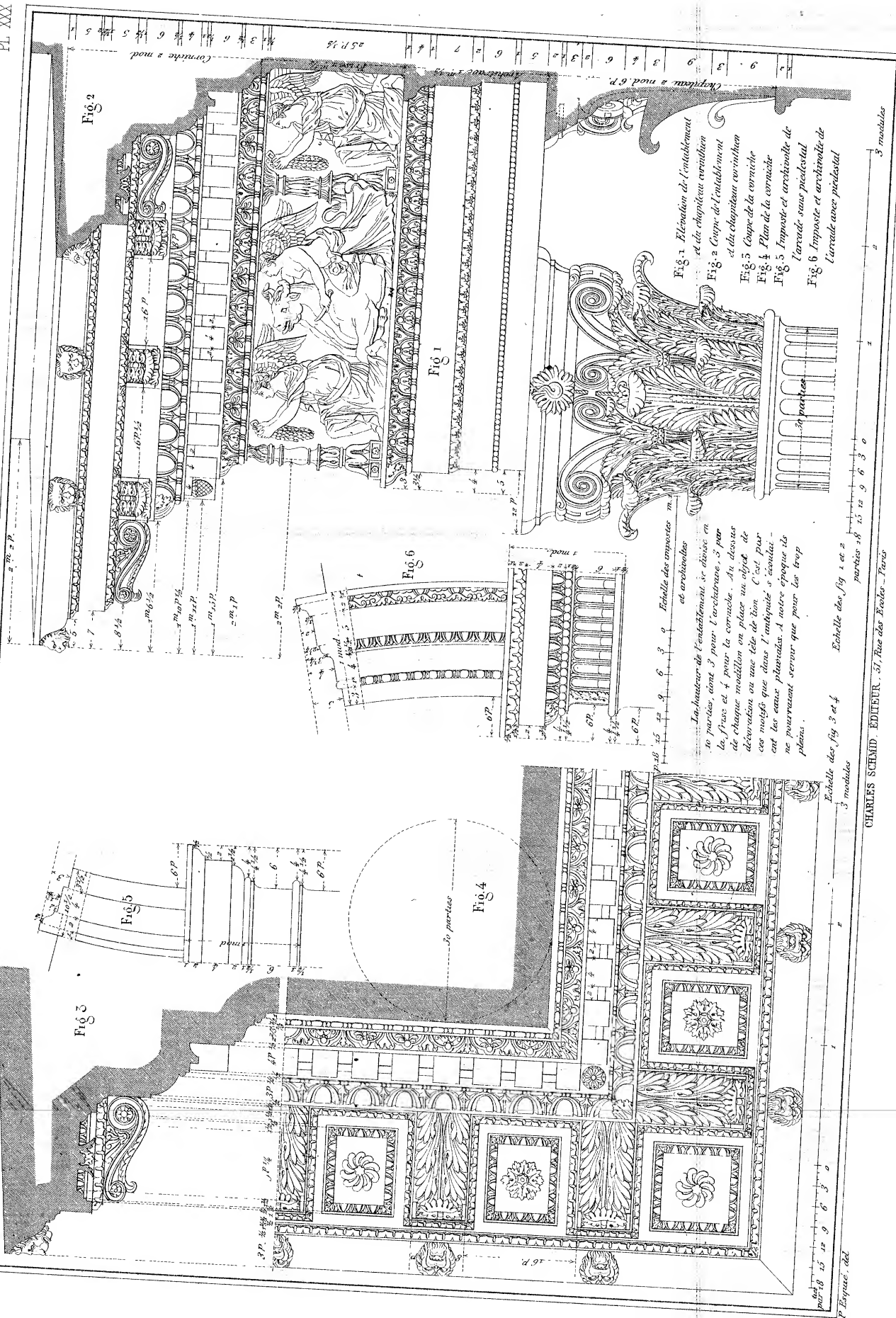


PLATE 31
STUDY OF THE CORINTHIAN CAPITAL

The Corinthian capital is decorated with two rows of leaves of the same height and so disposed that the upper leaf is spaced between the two lower ones. Between the upper leaves starts the cauliculus from which start the volutes, which terminate the capital.

Upon the volutes is placed the abacus, which is composed of three members, the cyma, the listel and the facia of the abacus.

Vignola gives the Corinthian capital 2 modules and 6 parts for its height, of which 2 modules are for the height of the vase and 6 parts for the abacus. All the other measures are indicated upon the plate and by considering it with attention the capital will be very easily understood and with the plan and profile one can become acquainted with all the measures.

In Fig. 3 and 4 the elevation and plan of the Corinthian pilaster are given. Corinthian pilasters may be used alone, behind columns or at the corners of buildings.

The height of the leaves and members of the mouldings are the same as for the column, but whereas the column has 30 parts at the height of the capital, the pilaster has 34. The column has 24 flutes and the face of the pilaster 7.

GLOSSARY

Cymaise. Cymatium.

Face de l'abaque. Face or facia of the abacus.

Feuille des caulicoles. Leaf of the caulicoles or small stems.

Grande feuille. Great leaf.

Petite feuille. Small leaf.

Rose ou fleuron. Rose or rosette.

Volute. Volute.

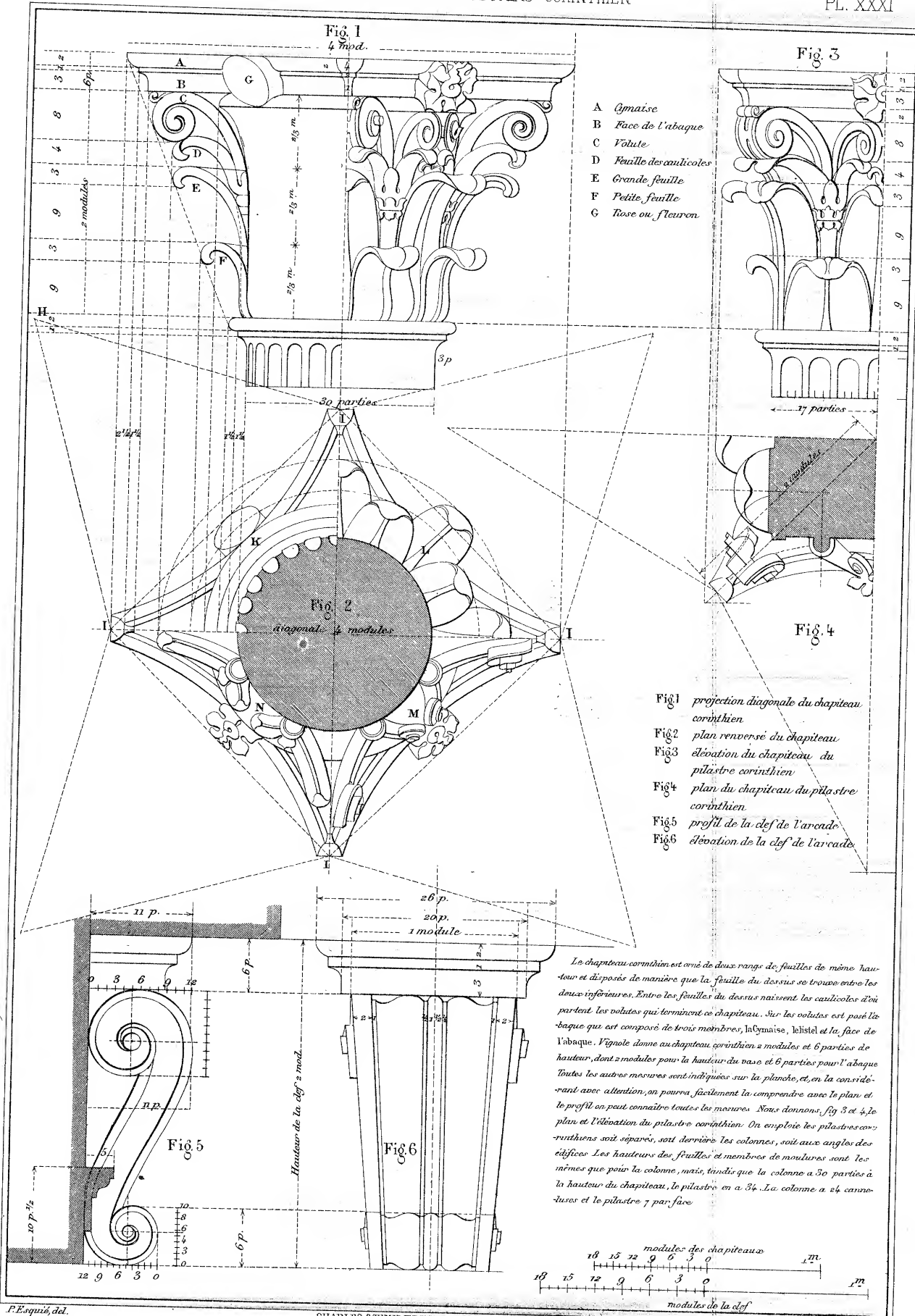


PLATE 32

CORINTHIAN PEDIMENT

The triangular part included between the three cornices of a pediment is called the tympanum. It is in this place that the ancients placed figures as we have been able to ascertain from several temples. On account of the richness of the order the Corinthian temples nearly always permitted of this style of decoration.

Sometimes figures or other motives forming a silhouette were also placed on the top of the pediment at the corners and upon the summit.

Dans un fronton la partie triangulaire comprise entre les trois corniches s'appelle l'ympan. C'est dans cet espace que les anciens plaçaient des figures ainsi qu'on a pu le constater pour plusieurs temples. Les temples corinthiens à cause de la richesse de l'ordre comportant presque toujours ce genre de décoration. On plaçait quelquefois par aussi au dessus de ces frontons dans les angles et au sommet, des figures ou autres motifs formant silhouette.

Section suivant AB

Profil du Modillon

Face du Modillon

Parties 18 15 12 9 6 3 0

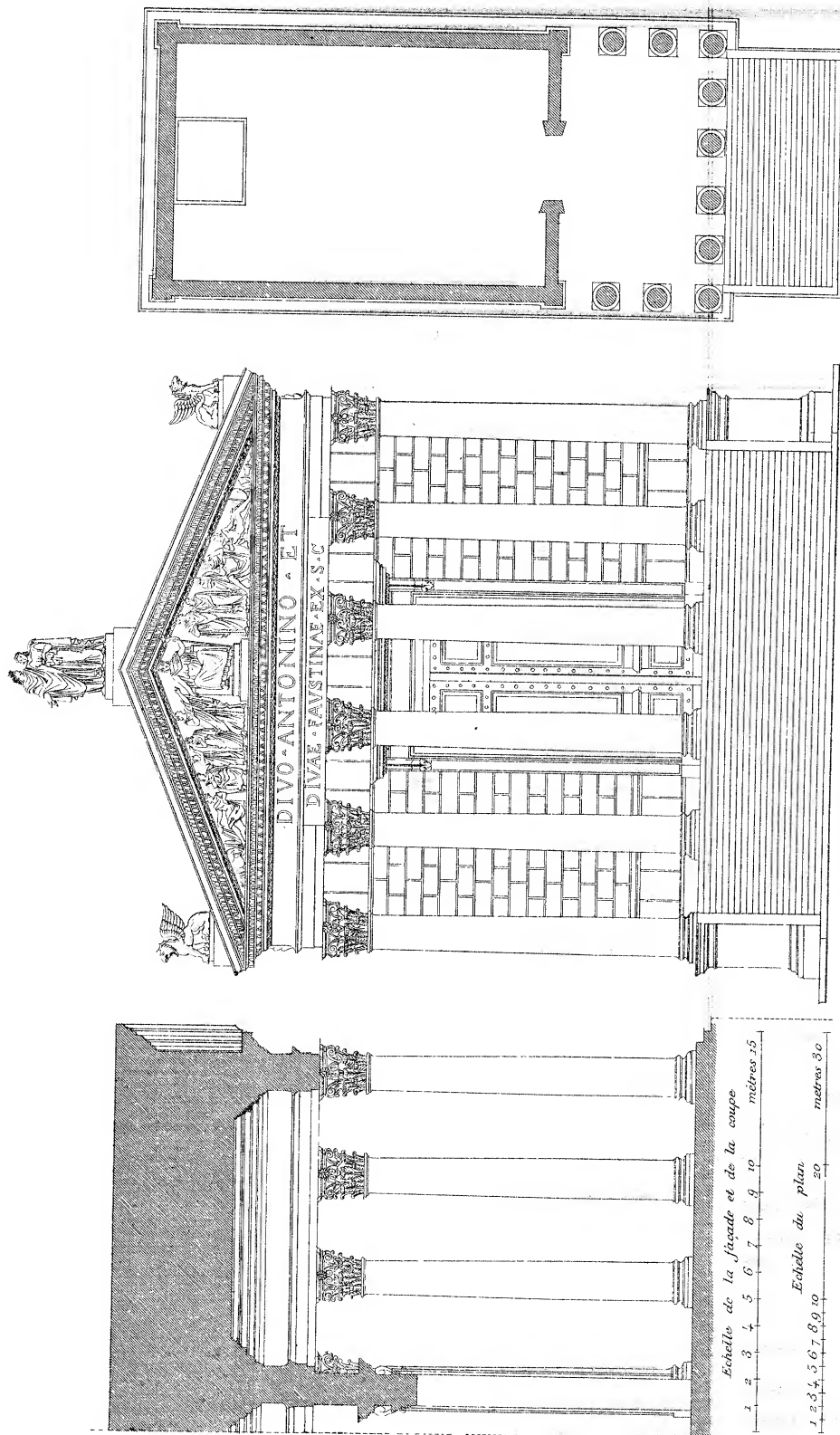
Modèles

PLATE 33

CORINTHIAN TEMPLE

This plate gives an example of a temple of the Corinthian order with 6 columns. It will be noticed that the scale of the architectural composition is in meters* and not in modules in order to indicate the actual proportions.

*Meter is equivalent to 39.37 inches.



L'Esquisse, del.

CHARLES SCHMID, EDITEUR, 51, Rue des Ecoles, Paris.

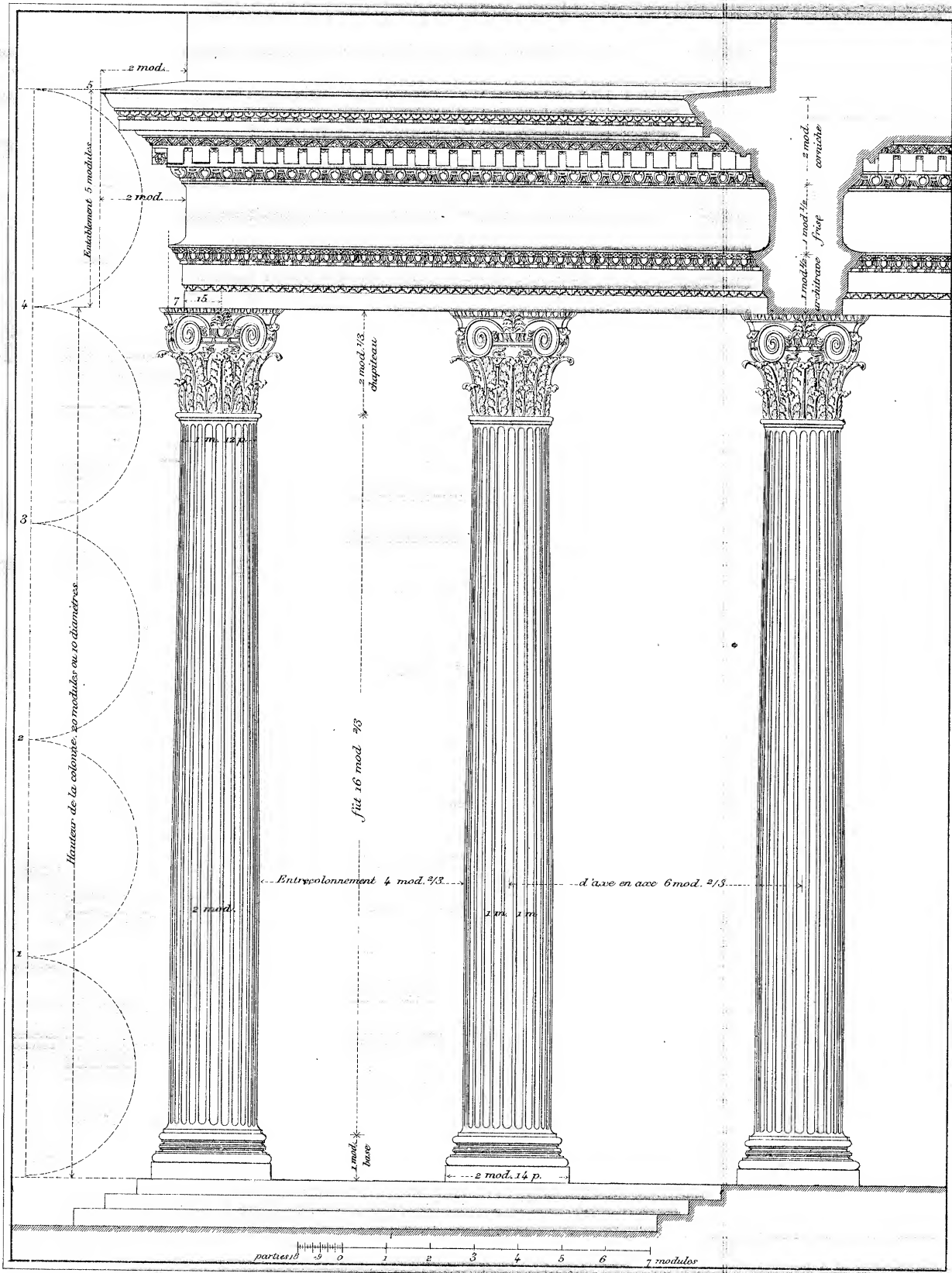
Cette planche donne un exemple de temple d'ordre corinthien à six colonnes. On remarquera que l'échelle de cet ensemble architectural est en mètres et non en modules afin d'indiquer les proportions réelles.

Weymann, sc.

PLATE 34

COMPOSITE INTERCOLUMNIATION

To draw the composite intercolumniation the same means will be used as that already given for the Corinthian order. Sometimes there is an occasion to swell the columns a $\frac{1}{2}$ part of a module at one-third the height of the shaft and to diminish them progressively to the underside of the astragal.



P Esquisé del

CHARLES SCHMID, ÉDITEUR, 51, Rue des Écoles, Paris

Stasman sc.

Pour dessiner l'entablement composite on emploiera le même moyen que celui dont on s'est déjà servi pour l'ordre corinthien, on aura soin toutefois de renforcer les colonnes d'une demi partie de module au tiers de la hauteur du fût et de les diminuer progressivement jusqu'à sous l'astragale.

PLATE 35

THE COMPOSITE PORTICO WITHOUT PEDESTAL

*This portico is used for the same purpose as the one with the Corinthian order. It is drawn the same way by dividing the total height into 5 parts, 1 part for the height of the entablature and 4 parts for the height of the column. The height of the arcade will be just twice its width. In the section we assume a room with a barrel vault, arranged in a manner so as to avoid the penetrations in the arcade.

GLOSSARY

Ou 2 fois la largeur. Or two times the width.

*As in the preceding plate, the diameter of the columns should be indicated just above the conge at the foot of the shaft, and should be 2 modules at that point.

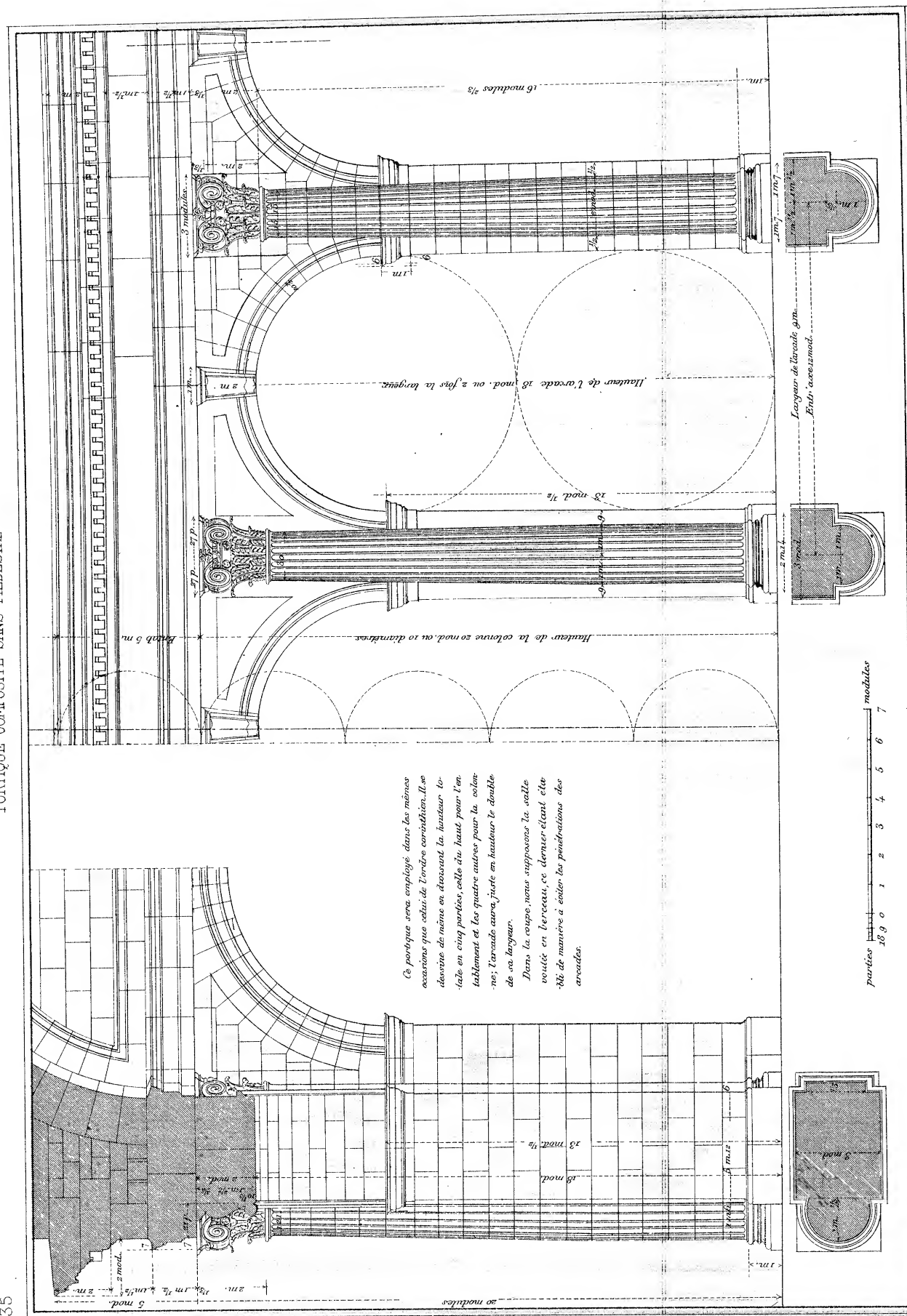


PLATE 36

COMPOSITE PORTICO WITH PEDESTAL

*This portico may be used for the facades of palaces as well as in large galleries and especially in large rooms where one wishes to decorate with great architectural richness.

For explanations refer to the corresponding plate of the Corinthian order with pedestal. The section represents a vault with a dome on pendentives.

*The note on the preceding plate, comprising diameter of columns, is equally applicable here.



PLATE 37

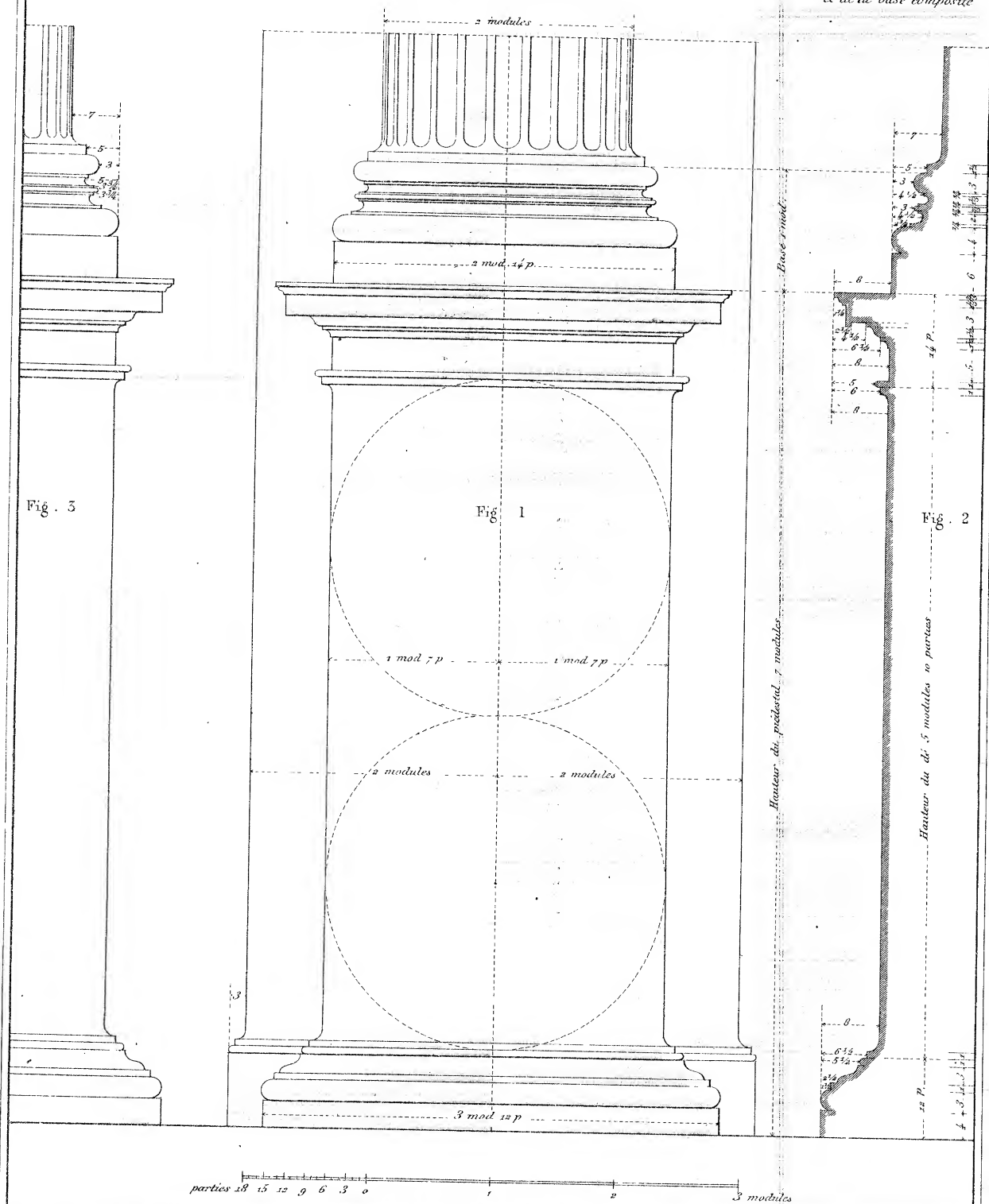
PEDESTAL AND BASE OF THE COMPOSITE ORDER

The proportions of the pedestal and base of the Composite order are the same as those for the Corinthian order, only differing in the mouldings of the cyma and the base.

Vignola has not decorated the mouldings of the pedestal, but this must not be regarded as an absolute rule, considering that this order partakes of the Ionic and the Corinthian. The shaft of the column as in the Corinthian has 24 flutes, the listels between the flutes $\frac{2}{7}$ the width of the flutes.

GLOSSARY

Hauteur de dé. Height of the die or dado.

Fig. 3 Profil du piédestal
et de la base compositeFig. 1 Elevation du piédestal
et de la base de l'ordre composite.Fig. 2 Coupe du piédestal
et de la base composite

P. Boqué, del.

CHARLES SCHMID, ÉDITEUR, 51, Rue des Écoles - Paris.

Strassmann, Sc.

Les proportions du piédestal et de la base de l'ordre composite sont les mêmes que celles de l'ordre corinthien, la différence n'existe que pour les moulures de la cymaise ou de l'empatement. Vigoule n'a pas orné les moulures de ce piédestal, mais il ne faut pas regarder cela comme une règle absolue ou que cet ordre participe de l'ionique et du corinthien. Le fût de la colonne comporte comme le corinthien 24 cannelures, les côtes entre les cannelures ont les $\frac{2}{3}$ de la largeur de la cannelure.

PLATE 38

ENTABLATURE AND CAPITAL OF THE COMPOSITE ORDER

For the Composite order Vignola has departed from the rule given for the Corinthian, in not making a dentil come directly over the capital. This arrangement was not made necessary by the modillions, its ornaments not being large enough to attract the eye by this irregularity.

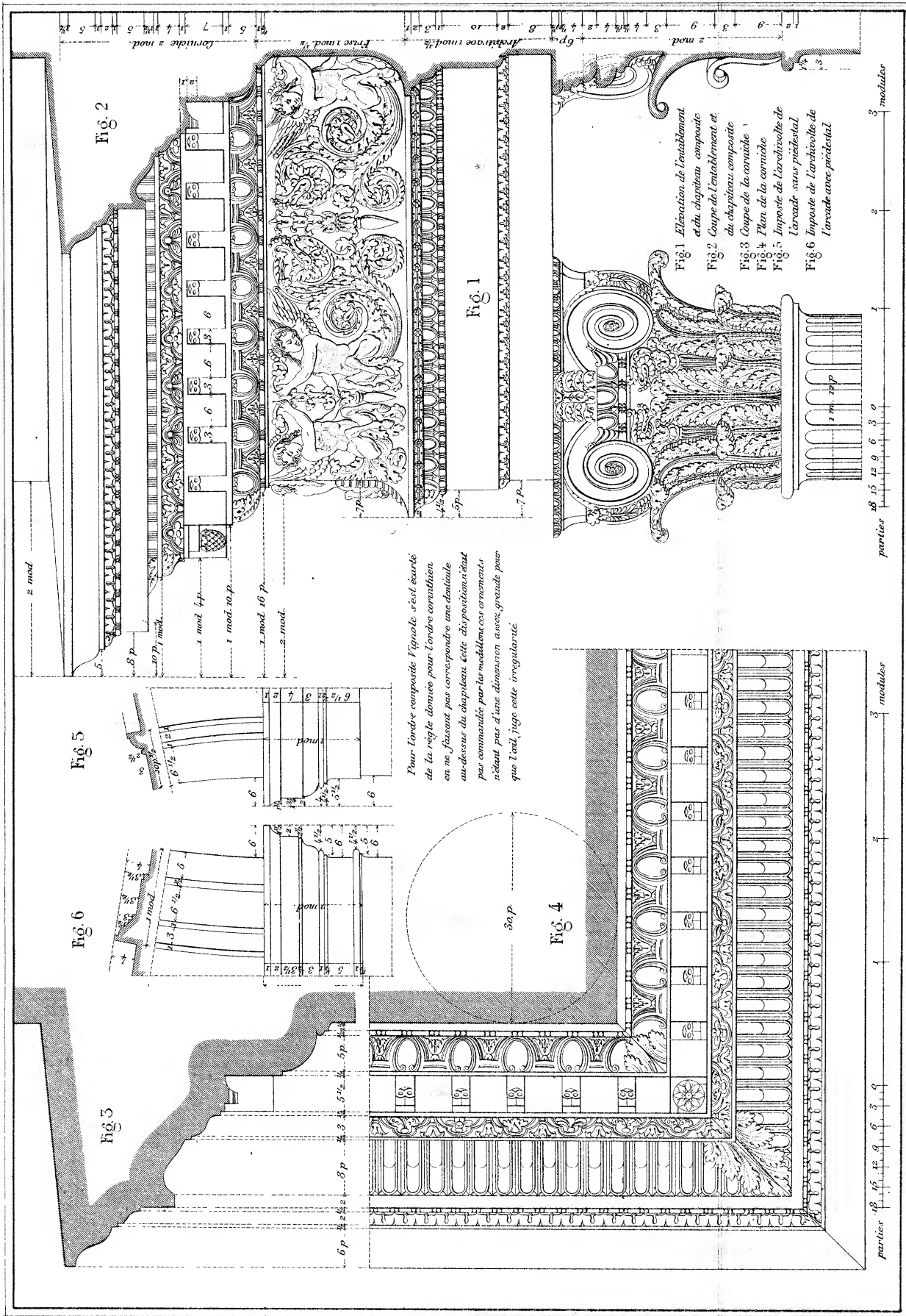


PLATE 39
COMPOSITE ORDER

The Composite capital is drawn like the Corinthian. The only difference being in the drawing of the volutes. Only this part is given in order to more clearly show its detail. The drawing of the spiral of the volute is made like the Ionic and reference may be made to Plate 23.

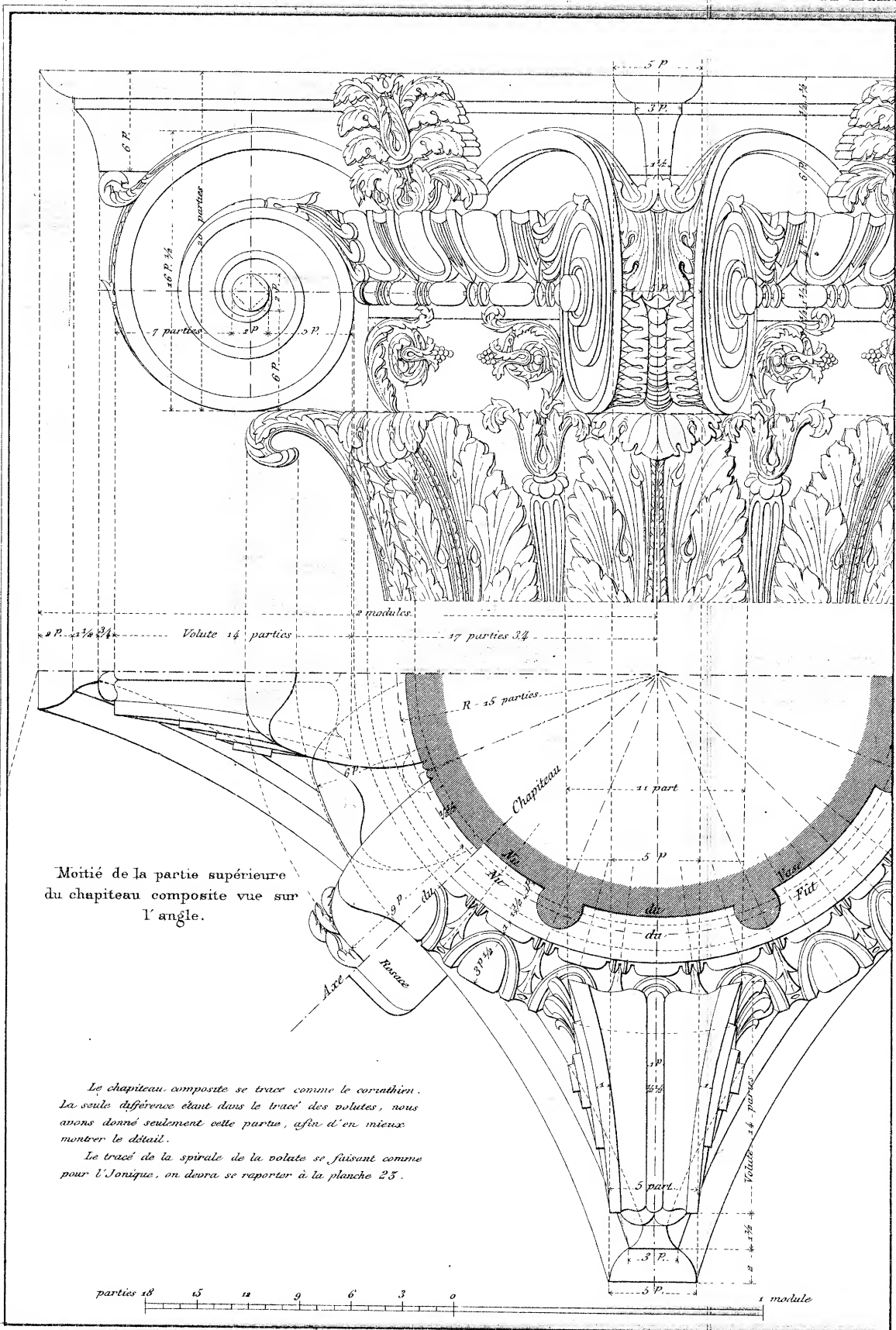
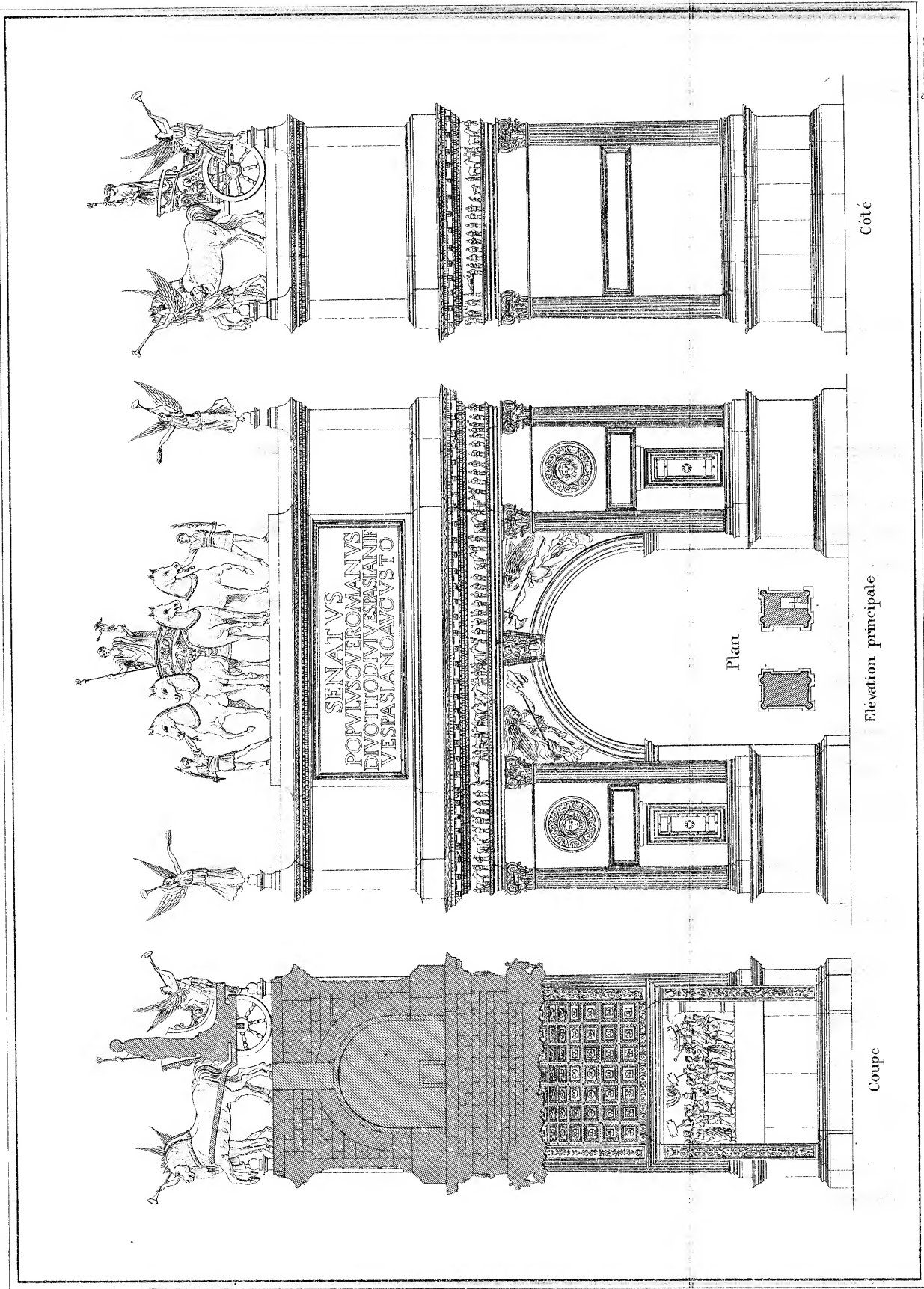


PLATE 40

ARCH OF TITUS AT ROME

The arch of Titus, a restoration of which is given, shows the manner in which the ancients used the Composite order. This order can be used for monuments which do not require great severity.



P. Esquié, del.
L'Arc de Titus dont nous donnons ici la restauration peut faire juger de la manière dont les Anciens employaient l'ordre composite. On peut employer cet ordre pour les monuments qui n'exigent pas une grande sévérité.
CHARLES SCHMID, EDITEUR, 34, Rue des Ecoles, Paris.
Stressman, sc.

PLATE 41

SUPERPOSITION OF THE ORDERS

This plate shows the first example of superposition of the Ionic order with the Doric order, and is taken from the theater of Marcellus at Rome. It will be noticed that the Ionic column is shorter than the Doric column by 1 module or $\frac{1}{2}$ diameter of the Doric order.

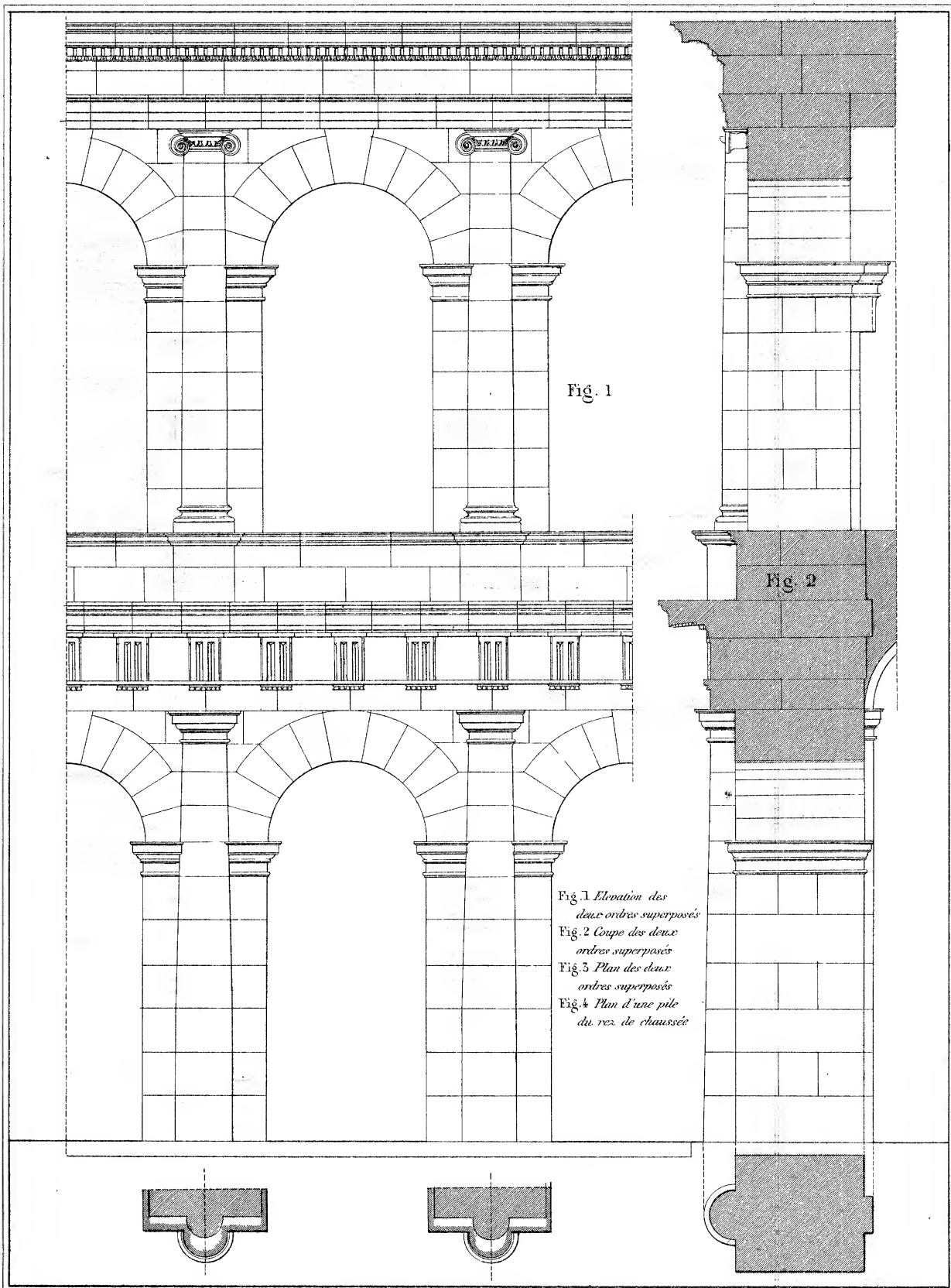
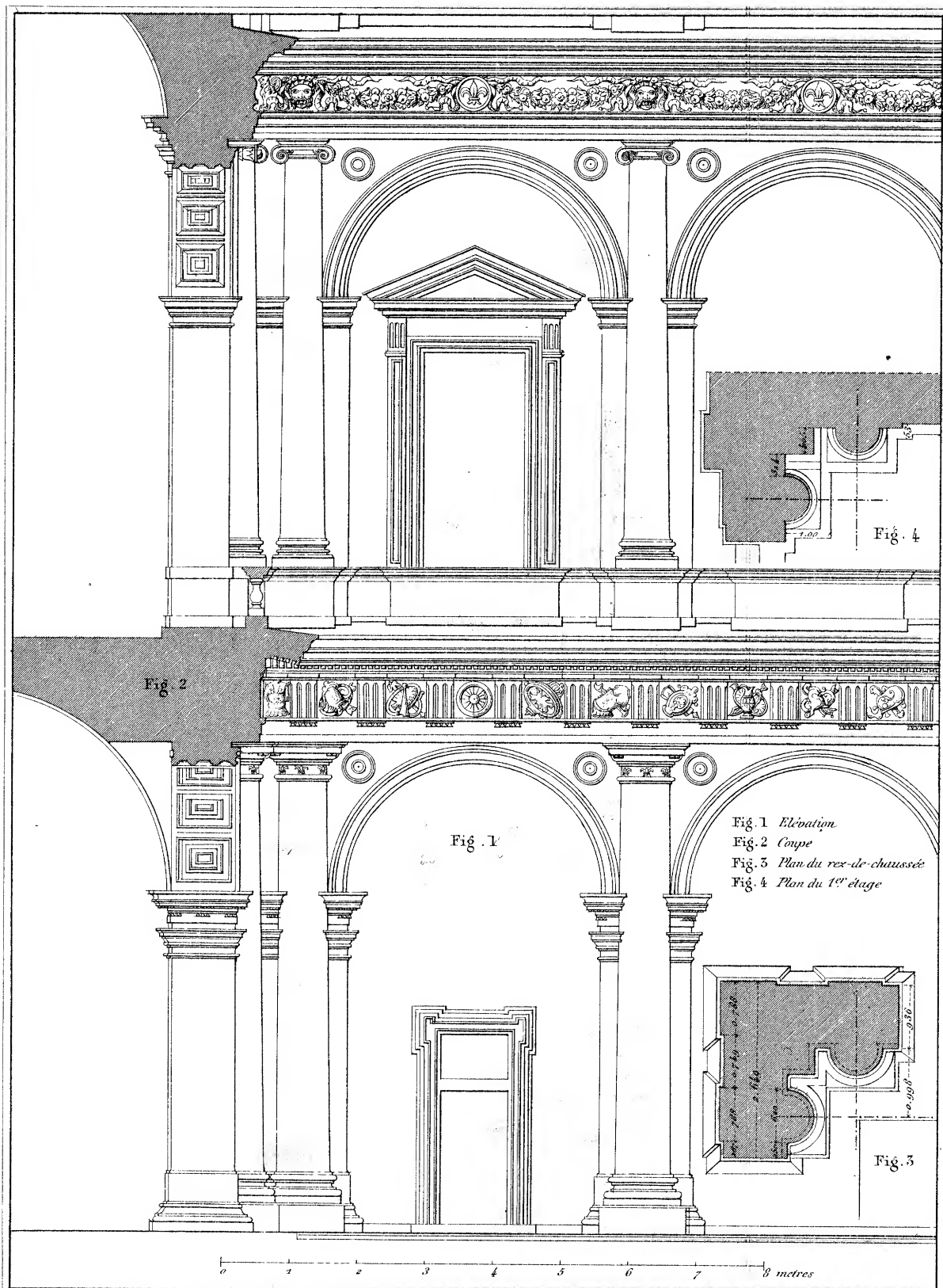


PLATE 42

SUPERPOSITION OF THE ORDERS

This example of superposition of the Ionic order with the Doric is taken from the interior court of the Farnese Palace at Rome. Attention is called to the arrangement of the corner of which the plan of two stories is given. The plan (Fig. 3) of the first story is shown with a dotted line on the plan of the rez-de-chaussée (ground floor).



P. Esquié, del.

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St. G. Mann, Sc.

Cet exemple de superposition de l'ordre Ionique à l'ordre dorique est tiré de la cour intérieure du Palais Farnèse à Rome. On y remarquera la disposition de l'angle dont nous donnons le plan aux deux étages. Le plan du 1^{er} étage est indiqué en pointillé sur le plan du rez-de-chaussée.

PLATE 43

THE PORTICO OF OCTAVIA AT ROME

When two orders are placed in juxtaposition, the small order is generally given $\frac{2}{3}$ of the height of the larger order. It is well not to deviate too far from this relation when it cannot be exactly followed. For an example the portico of Octavia at Rome, in which this principle has been followed, is given.

Lorsque l'on juxtapose deux ordres, on donne généralement au plus petit les $\frac{2}{3}$ de la hauteur du plus grand. Il est bon, de ne pas trop s'écarter de ce rapport lorsque l'on ne peut le suivre exactement.

Comme exemple nous donnons le portique dit d'Octavie à Rome, pour lequel ce principe a été observé.

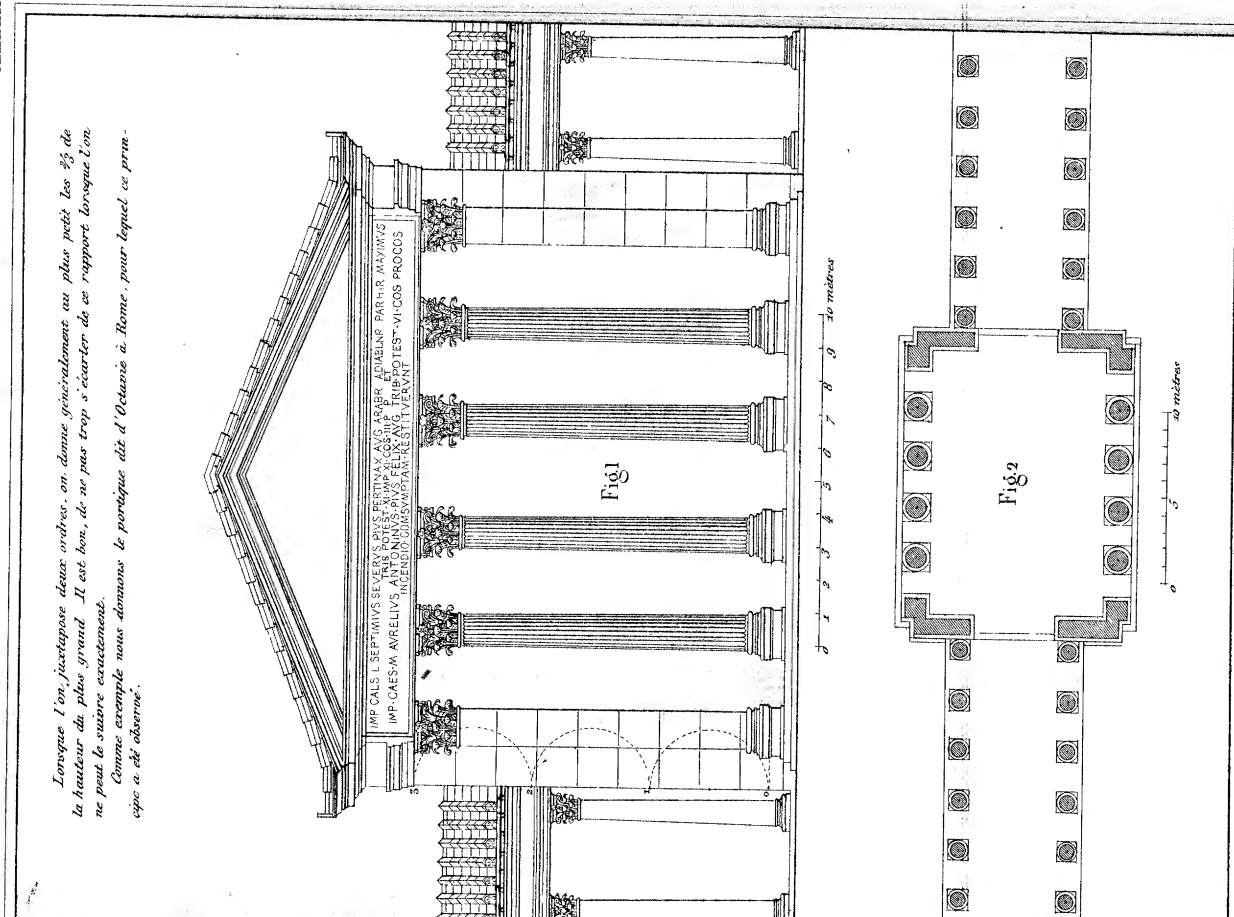


PLATE 44

MANNER OF FORMING THE PROFILE OF COLUMNS

The diminution or galbe* of columns is made in several ways. The two which Vignola regarded as the best are given.

Fig. 1. First determine the height and the thickness of the column and the amount we wish to diminish it from a point $\frac{1}{3}$ of its height. Describe a semi-circle at the place where it begins to diminish and divide the arc AB into as many parts as wished, the point being the projection of B'. The rest will be understood by a study of the figure.

Fig. 2. The data that was used for the Tuscan method, being established, draw the line PO, then through the point M draw the arc MR equal PQ. Extend this line to the point O, from which draw as many lines as necessary for the required number of points, always making ST equal PQ.

Fig. 3. If it is wished to make a twisted column, first draw one of the two straight columns, then draw a small cylinder which is called E on the plan to indicate how much the column should be twisted. Divide the circle into 8 equal parts, raise from these points of division, 4 parallel lines to the cathetus dividing the column into 48 equal parts, form the middle spiral which will be the center of the column. Upon this center set off the corresponding thickness of the straight column, line for line. It will be noticed that the numbers 1, 2, 3, 4 only serve for the first circumvolution in going up, because it is from the center that the first ascent must be begun; for all the rest follow the circumference of the little circle, except for the last circumvolution at the top, for which proceed as at the bottom.

GLOSSARY

Fut corinthien renflé. Corinthian shaft entasized.

Fut de colonne torse. Shaft of column twisted.

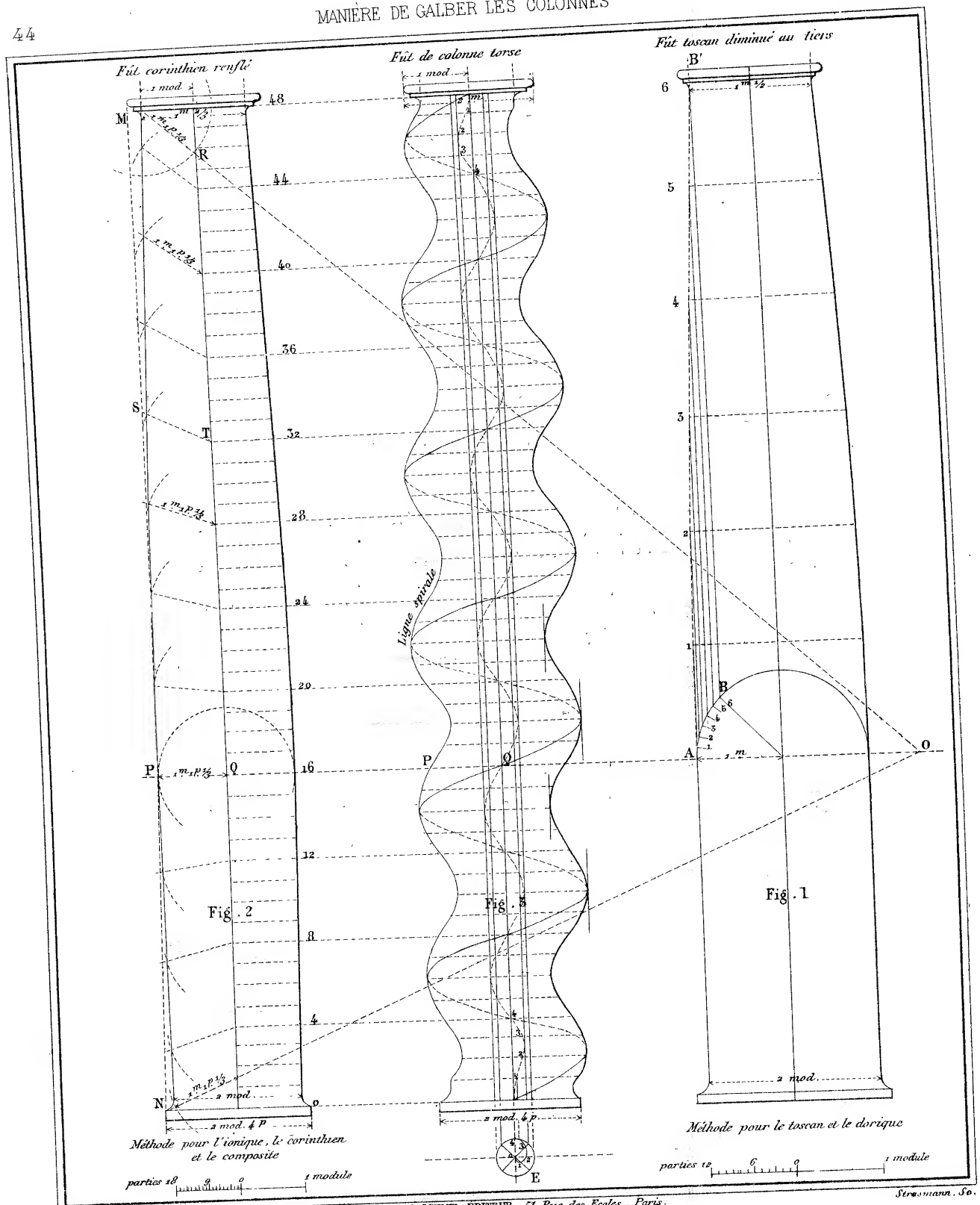
Fut toscan diminué au tiers. Tuscan shaft diminished from the point.

Méthode pour le toscan et le dorique. Method for the Tuscan and the Doric.

Méthode pour l'ionique, le corinthien et le composite. Method for the Ionic, the Corinthian and the Composite.

*Galbe, curve, or sweep, as of a column's profile. In general, used for form or contour; here used for any variation from the vertical in the profile of a column that has an object a more graceful contour. Galbe may mean either entasis (Fr. *renflement*), swelling, as shown in the right-hand figure, or simple diminution, as in the first figure, which is the same in English. It may be well to note that "entasis" is in this country commonly and incorrectly used for "diminution." It should never be used other than for "swelling." Examples of diminution in columns are found among the earliest Greek remains; while the entasis seems to have been a refinement of the later Greek monuments, having for its object the rectification of an optical illusion, that is, the concave effect produced in columns by right line profiles. The good taste of entasizing columns has been questioned, on the ground of interference with the perfect structural composition belonging to an element entirely utilitarian in its functions.

44



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La diminution ou le galbe des colonnes peut se faire de plusieurs manières. Nous indiquons les deux que Vignole considère comme les meilleures. —
 Fig. 1. On détermine d'abord la hauteur, la grosseur de la colonne et la quantité dont on veut diminuer, du tiers au sommet. On trace un demi-cercle au départ du galbe et l'on divise en autant de parties que l'on veut l'arc AB, le point B étant la projection de B'; le reste se comprendra par l'inspection de la figure.
 Fig. 2. Les données étant bien établies ainsi qu'il a été fait pour la méthode toscane, on mène la ligne PO, puis, du point M, traçant un arc MR = PQ, on obtient, en prolongeant cette ligne, le point O, duquel on mènera autant de lignes que l'on désirera obtenir de points, mais en faisant toujours, par exemple ST = PQ.
 Fig. 3. Si l'on veut obtenir une colonne torse, on dessinera d'abord une de ces deux colonnes droites; on tracera ensuite un petit cylindre que nous avons marqué en plan en E pour indiquer de combien on veut que la colonne soit torse. On divisera le cercle en huit parties égales, pour élever, de ces points de division, quatre lignes parallèles à la cathète, partageant la colonne en quatre-vingt-huit parties égales, on formera la spirale du milieu, qui sera le centre de la colonne. A ces quatre lignes parallèles, on rapportera la grosseur correspondante de la colonne droite, ligne pour ligne. On remarquera que les nombres 1, 2, 3, 4 ne servent que pour la première circonvolution, en montant, parce que c'est du centre qu'il faut commencer cette première montée; il faut suivre, pour tout le reste, la circonférence du petit

PLATE 45

PARALLEL OF BALUSTRADES

The balustrade is a support or elbow rest. Its height is sometimes a little more and sometimes a little less than a meter*. It should be set on a plinth sufficient to detach its base from the projection of the cornice in perspective. The pedestals which terminate the balusters should always harmonize in richness with the orders with which the balustrades are used. Do not confuse a balustrade with an attic. A balustrade is always in scale with the human figure, while the attic is proportioned to the building. Here the four principal types of balustrades are given, the meter and not the module being taken as the unit of measure.

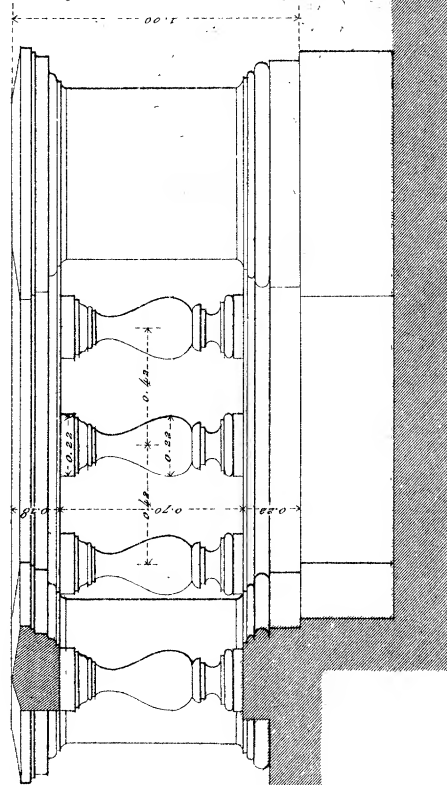
GLOSSARY

Balustrade corintheinne. Corin-
thian balustrade
Balustrade dorique. Doric balus-
trade.

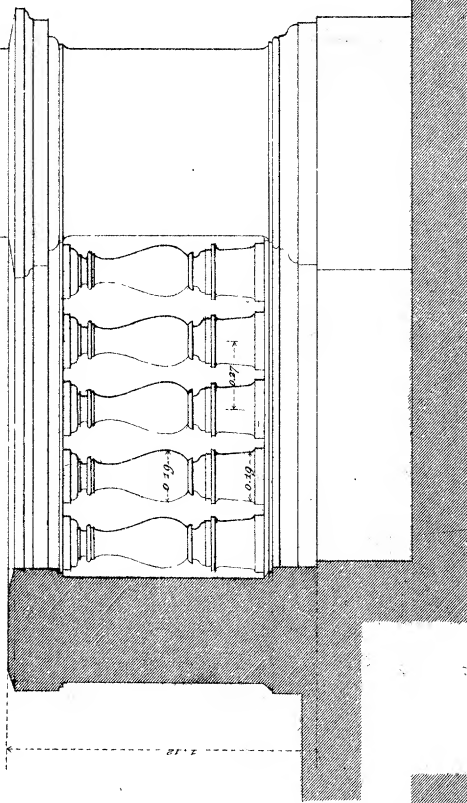
Balustrade ionique. Ionic balus-
trade.
Balustrade toscane. Tuscan balus-
trade.

*The French foot is to the English as 1,066 is to 1,000; from this we infer that the usual height of a balustrade d'appui (elbow support) is from 39 inches to a metre (39.37 inches) or thereabouts.

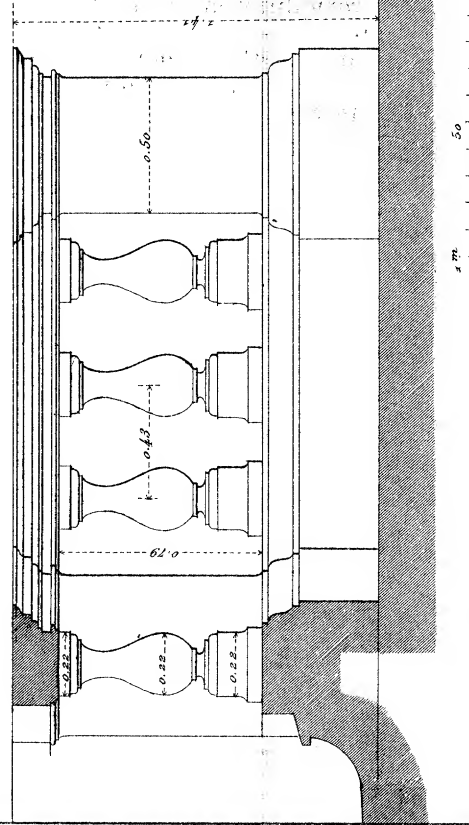
Balustrade toscane



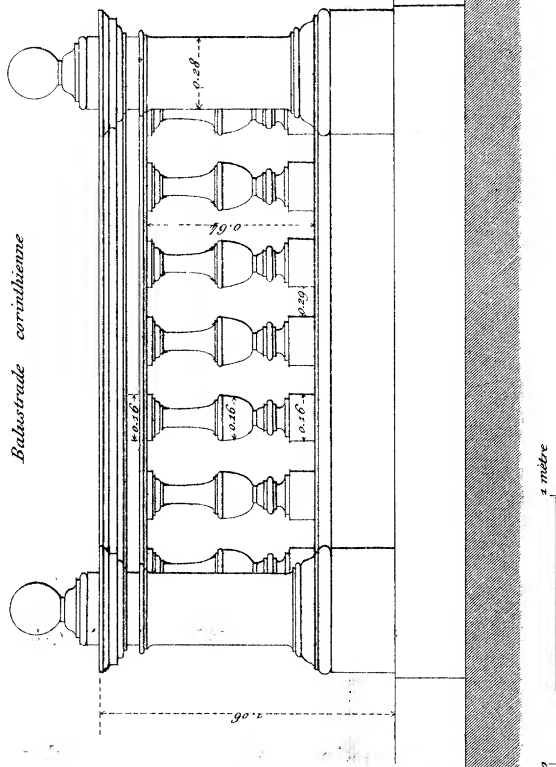
Balustrade ionique



Balustrade dorique



Balustrade corinthienne



1 m. 50 1 mètre

P. Esprit del.

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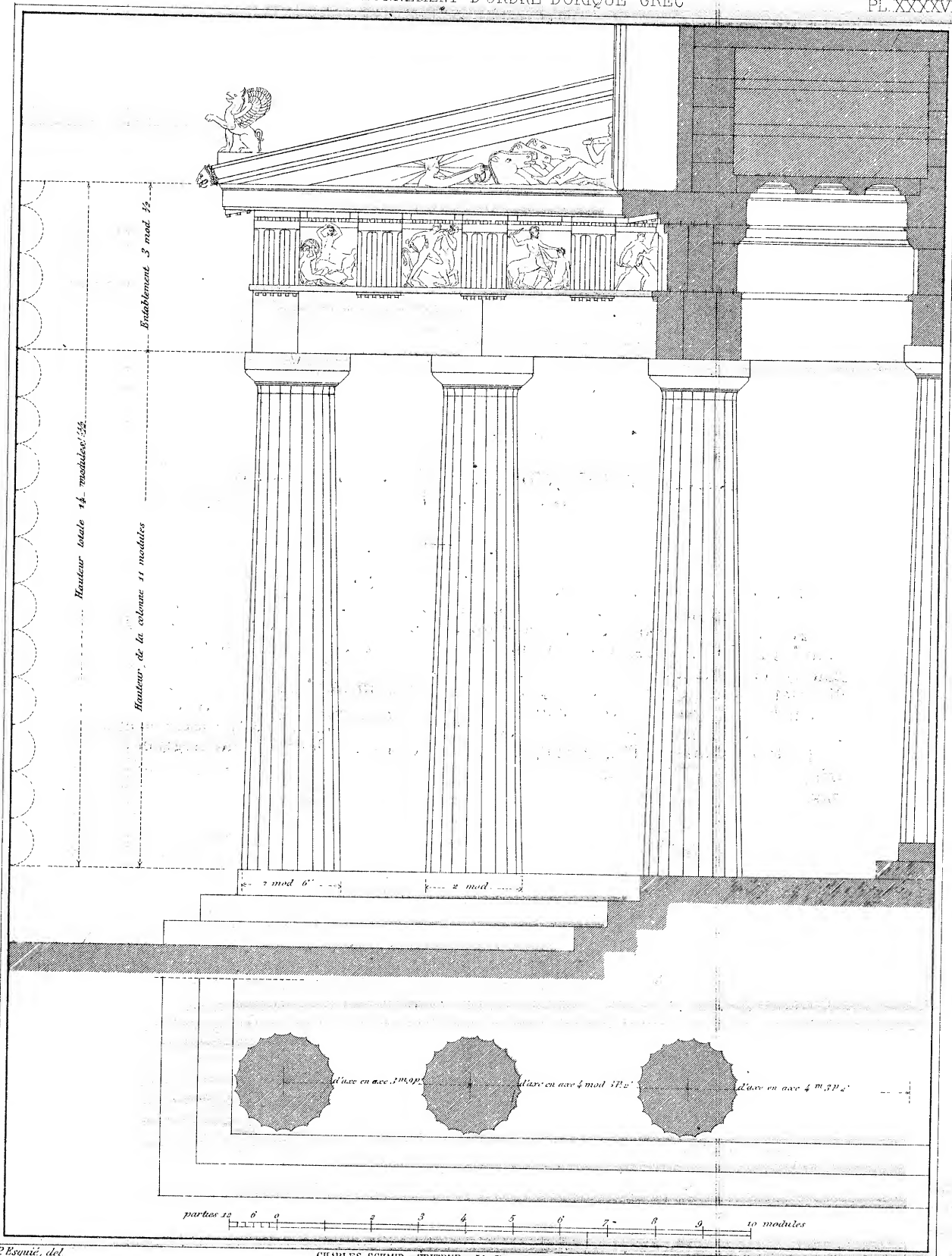
Stramann Sc.

La balustrade n'est autre chose qu'un appui ou accoudoir. Sa hauteur est tantôt un peu plus et tantôt un peu moins de un mètre. Elle doit être élevée sur un socle suffisant pour délayer en perspective sa base de la saillie de la corniche. Les piédestaux d'arcès servent toujours en rapport comme richesses avec l'ordre avec lequel les balustrades doivent servir. Il ne faut pas confondre une balustrade avec un attique. Une balustrade étant toujours en rapport avec l'édifice humaine tandis que l'attique est proportionné au monument. — Nous donnons ici les quatre principaux types de balustrade, le mètre et non le module étant pris pour unité de mesure.

PLATE 46

INTERCOLUMNIATION OF THE GREEK DORIC ORDER

The ruins of the various Greek temples which have come to us were all of very different proportions. A drawing is given of the Doric order which approaches very near to that of the Parthenon at Athens. To find the module of this order, the height being given, divide the height into $14\frac{1}{2}$ parts. One of these divisions will be the module. Take 11 modules for the column and $3\frac{1}{2}$ modules for the entablature. For the drawing of the detail see plate 47. It will be noticed that like the other Doric orders which are given at the beginning, the module is divided into 12 parts and in order to give the measures for the smaller elements, each of these parts is divided into 12 minutes.



P. Esquié, del.

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Strasmann, Sc.

Les divers temples Grecs dont les restes sont parvenus jusqu'à nous étaient tous de proportions très différentes. Nous donnons ici un tracé de l'ordre dorique qui se rapproche très sensiblement du Parthénon à Athènes. Pour trouver le module de cet ordre étant donné la hauteur à atteindre, on divisera en 14 parties $\frac{1}{2}$, une de ces divisions sera le module. On prendra 11 modules pour la colonne et 3 modules $\frac{1}{2}$ pour l'entablement. Pour le tracé du détail on se reportera à la planche 47.

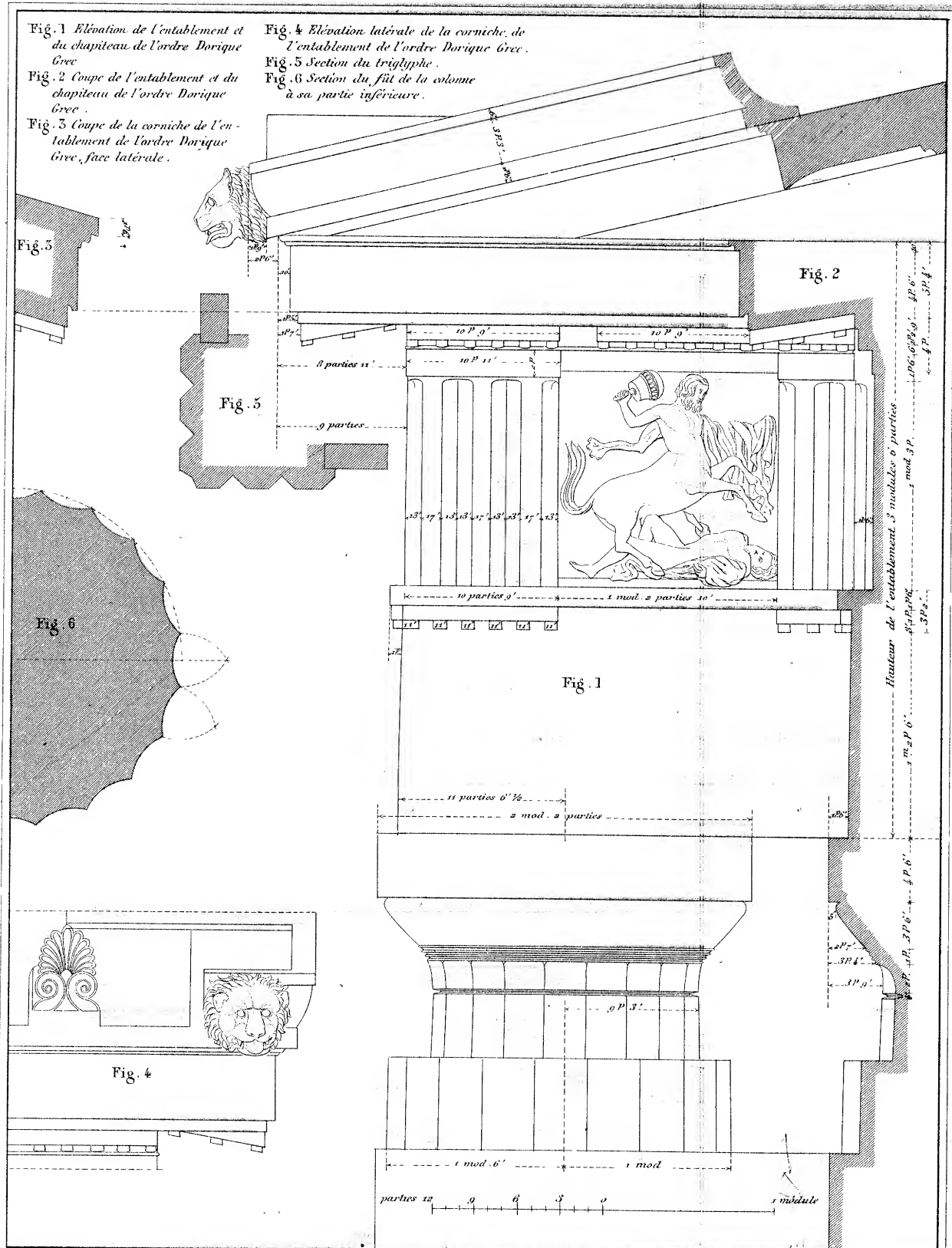
On remarquera que comme pour les autres ordres doriques que nous avons donné au début, nous avons divisé le module en 12 parties et pour pouvoir donner les mesures des éléments plus fins, subdiviser chacune de ces parties en 12 millimètres.

PLATE 47

**ENTABLATURE AND CAPITAL OF THE GREEK
DORIC ORDER**

The drawing of an entablature and capital of the Doric order is given in which the proportions closely resemble those of the Parthenon at Athens.

It will be noticed that the column given is not symmetrical and is 2 modules and 6 minutes wide at the base. The other columns ought to be exactly two modules. This difference comes from the fact that an inclination toward the interior is given to the column to increase its stability. It will be noticed that the triglyph in the Greek order is exactly at the angle of the frieze and not on the axis of the column as in the Roman Doric or the Renaissance. This arrangement is much more logical, the triglyphs being the points of support of the cornice and the metopes only decorated spaces.



P. Esquié, del.

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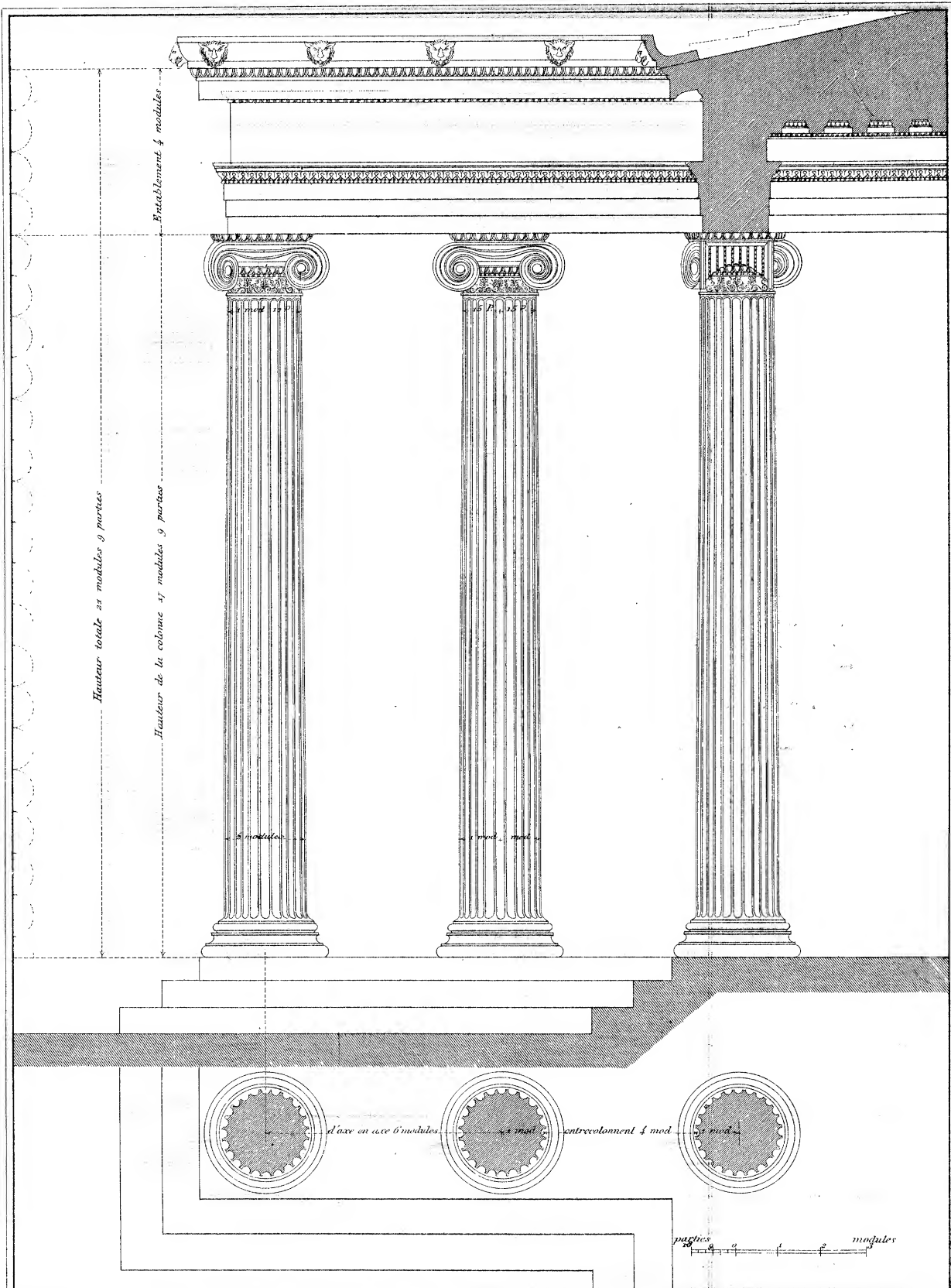
St. arnaux, sc.

Nous donnons ci-dessus le tracé d'un entablement et d'un chapiteau d'ordre Dorique dont les proportions se rapprochent très sensiblement du Parthénon à Athènes. On remarquera que la colonne donnée n'est pas symétrique et est de 2 mod. et 6 à la base. Les autres colonnes doivent avoir exactement 2 dia^m. Cette différence provient de ce que l'on donnait une inclinaison à la colonne vers l'intérieur pour augmenter la stabilité. On remarquera que le triglyphe dans les ordres Grecs est exactement à l'angle de la frise et non sur l'axe de la colonne comme dans les Doriques Romains ou de la Renaissance. Cette disposition est beaucoup plus logique, les triglyphes étant des points supportant la corniche et les métopes de simples remplissages.

PLATE 48

INTERCOLUMNIATION OF THE GREEK IONIC ORDER

To draw the Greek Ionic Intercolumniation divide the height into $21\frac{1}{2}$ parts; one of these parts will be the module. Take 4 of them for the entablature and $17\frac{1}{2}$ for the column. This module is divided into 18 parts and for the subdivisions each one of these parts is divided into 18 minutes. For details refer to plate 49.



P. Esquie, del

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Strasman, Sc.

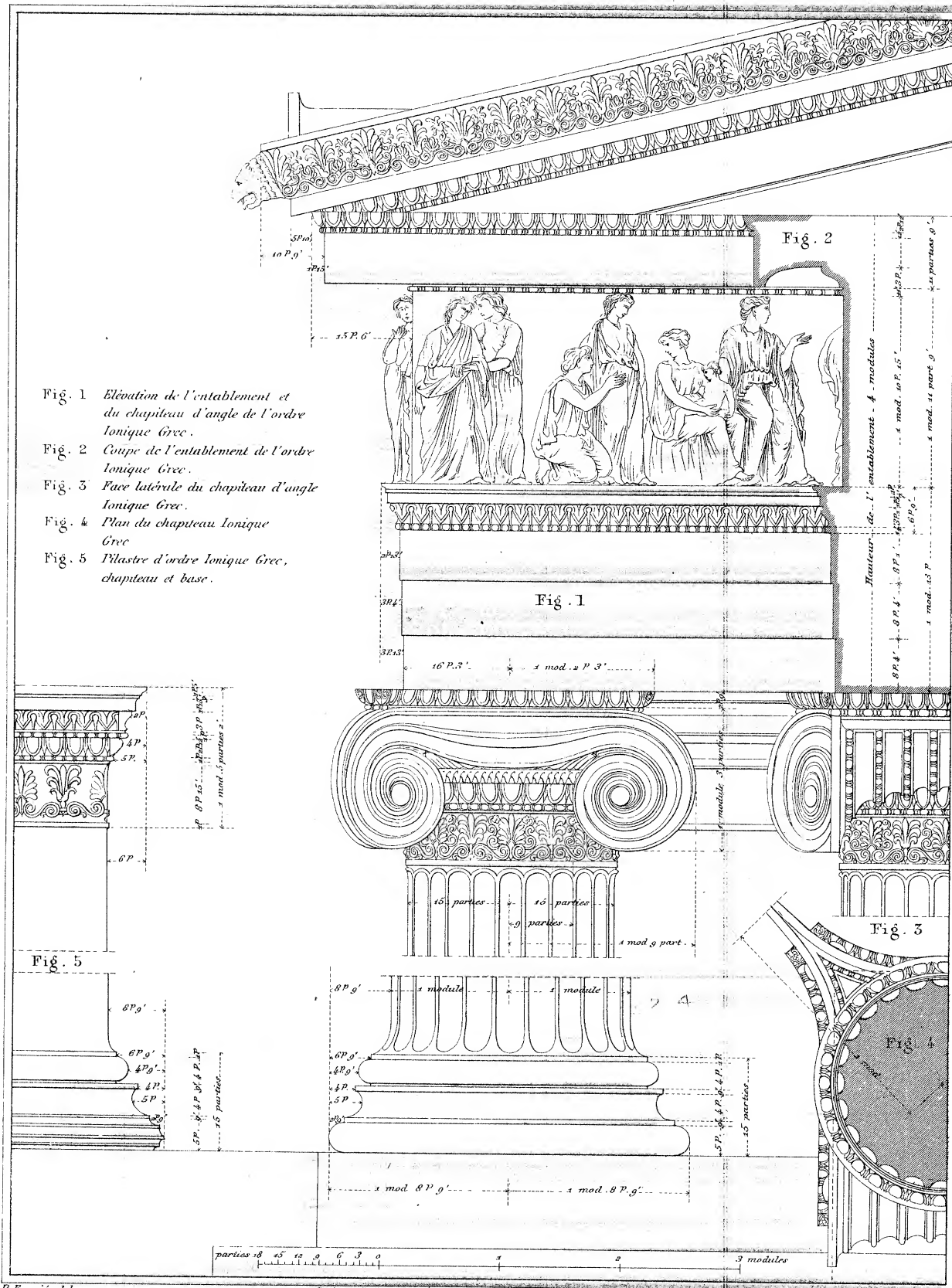
Pour dessiner l'entablement Ionique Grec on divisera la hauteur en 21 parties et demi, une de ces parties sera le module. On en prendra 4 pour l'entablement et 17 et demi pour la colonne. Ce module sera divisé en 18 parties et pour les subdivisions chacune de ces parties en 18 minutes. Pour les détails on se reportera à la planche 49.

PLATE 49

ENTABLATURE, CAPITAL AND BASE OF THE GREEK
IONIC ORDER

The Greek Ionic orders were always far from similar, and only from the Acropolis at Athens have we been able to collect several examples. The one which is given is similar to the Erechtheum in which the gracefulness and richness is to be noted.

In order to give the dimensions for the several members of the mouldings, which are very delicate, the module is divided into 18 parts and each of these parts into 18 minutes. In these orders, which were of an extreme richness, the frieze was nearly always decorated in low relief.



P. Esquié, del

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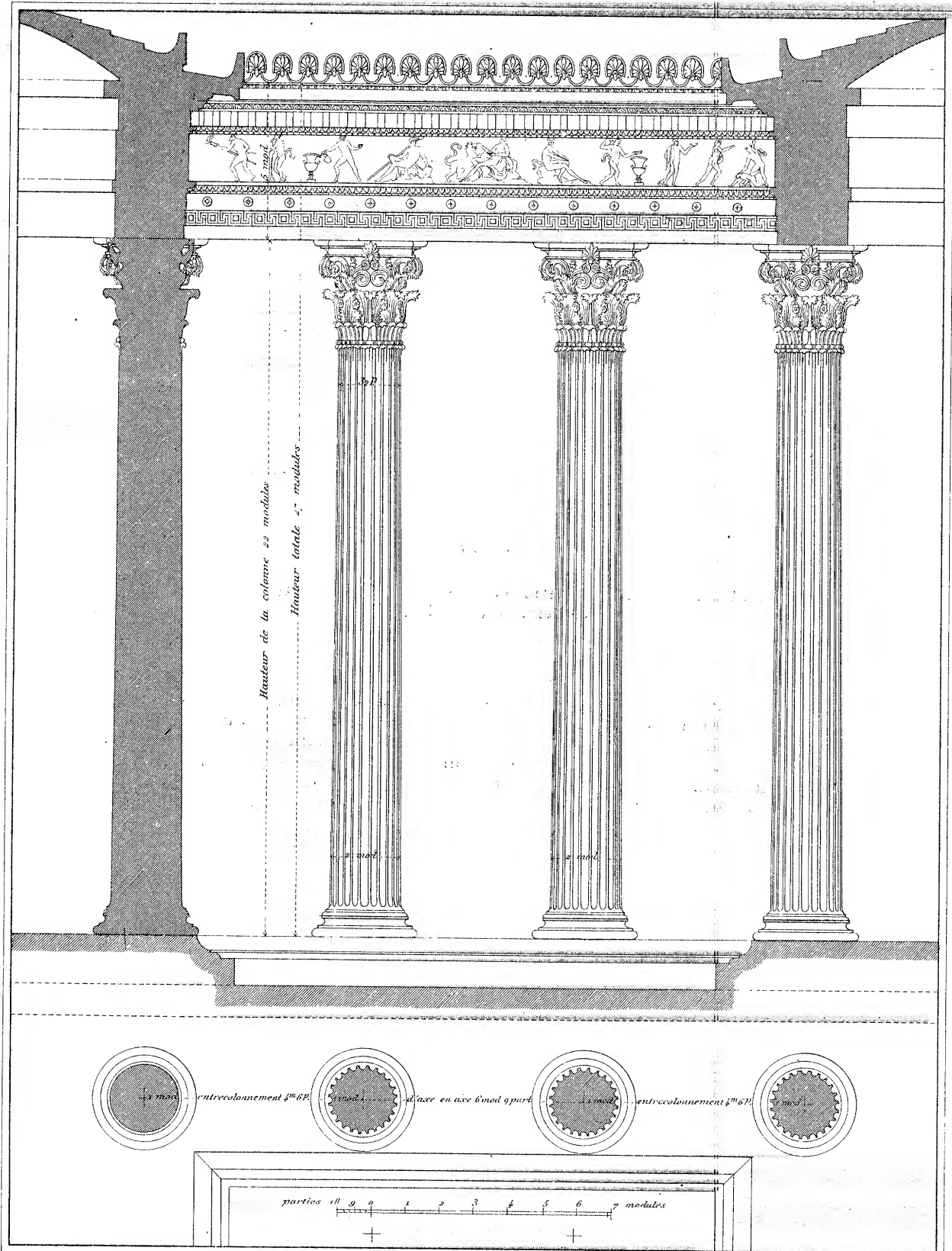
Strasmann, Sc

Les ordres Ioniques grecs étaient loin d'être toujours semblables et sur l'acropole d'Athènes seulement nous aurions pu recueillir plusieurs exemples. Celui que nous donnons se rapproche du temple d'Érechthée dont on remarquera la grâce et la richesse. Afin de pouvoir donner des dimensions pour les divers membres de moulures qui sont très délicats, nous avons divisé le module en 18 parties et chacune de ces parties en 18 minutes. Dans ces ordres qui étaient d'une extrême richesse le fût était presque toujours décoré de 16 cannelures.

PLATE 50

INTERCOLUMNIATION OF THE GREEK CORINTHIAN ORDER

Only a few examples of the Greek Corinthian order are known. The one given is taken from the monument of Lysicrates at Athens. To draw the Greek Corinthian intercolumniation, the height being given, divide the dimension into 27 equal parts. One of these parts will be the module. Then take 5 modules for the entablature and there remains 22 for the column. The distance between columns is 4 modules and 6 parts, and the distance from axis to axis is 6 modules and 9 parts. For details refer to plate 51.



P. Esqu , del

CHARLES SCHMID,  DITEUR, 51, Rue des  coles - Paris

Strassmann, Sc

On ne connaît que très peu d'exemples d'ordre corinthien Grec. Celui que nous donnons dérive du monument connu sous le nom de Lysicrates à Athènes. Pour dessiner un entrecolonnement corinthien Grec, étant donné la hauteur on divisera cette dimension en 27 parties égales. Une de ces parties sera le module. On prendra alors 5 modules pour l'entablement et il en restera 22 pour la colonne, les colonnes s'espaceront de 9 modules et 1/2 d'axe en axe. Pour les détails on se reportera à la planche 51.

PLATE 51

ENTABLATURE, CAPITAL AND BASE OF THE GREEK CORINTHIAN ORDER

This plate represents the detail of the Greek Corinthian Intercolumniation. It will be noticed that the module is always equal to a half diameter of the shaft of the column at the base. This module is divided into 18 parts and each part into 18 minutes. An astragal formed with the bead moulding has been added to the capital, although in the monument of Lysicrates, there is a hollow at this point. It is supposed that this added member was in metal.

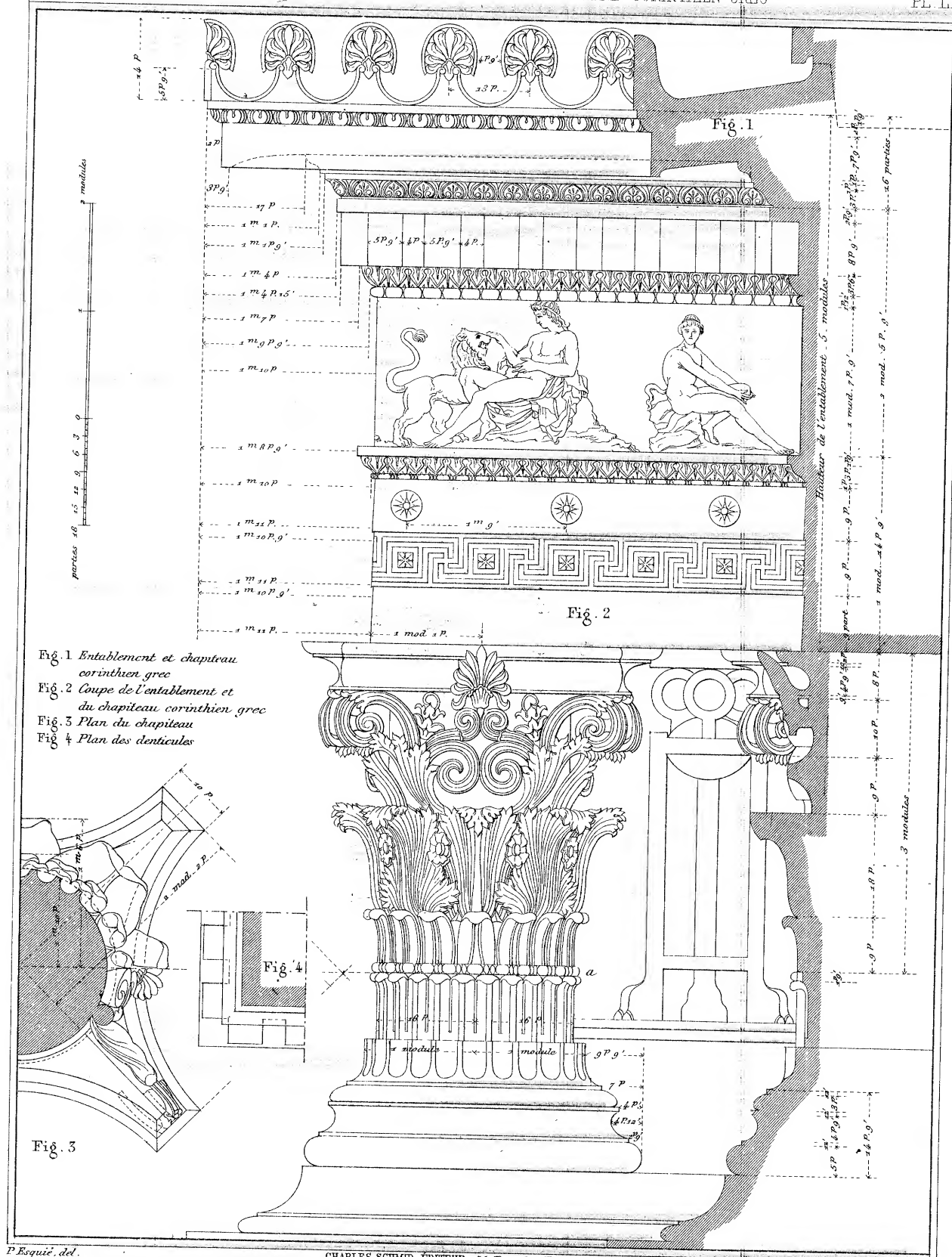


PLATE 52

STUDIES OF DOORS

Fig. 1 of this plate represents the front door of the Farnese Palace on Mount Palatine, built by Vignola in rustic style. The upper part which we have omitted was not designed by Vignola.

Fig. 2 represents the front door of the museum of the École des Beaux Arts, of which Felix Duban is the architect.

Fig. 1

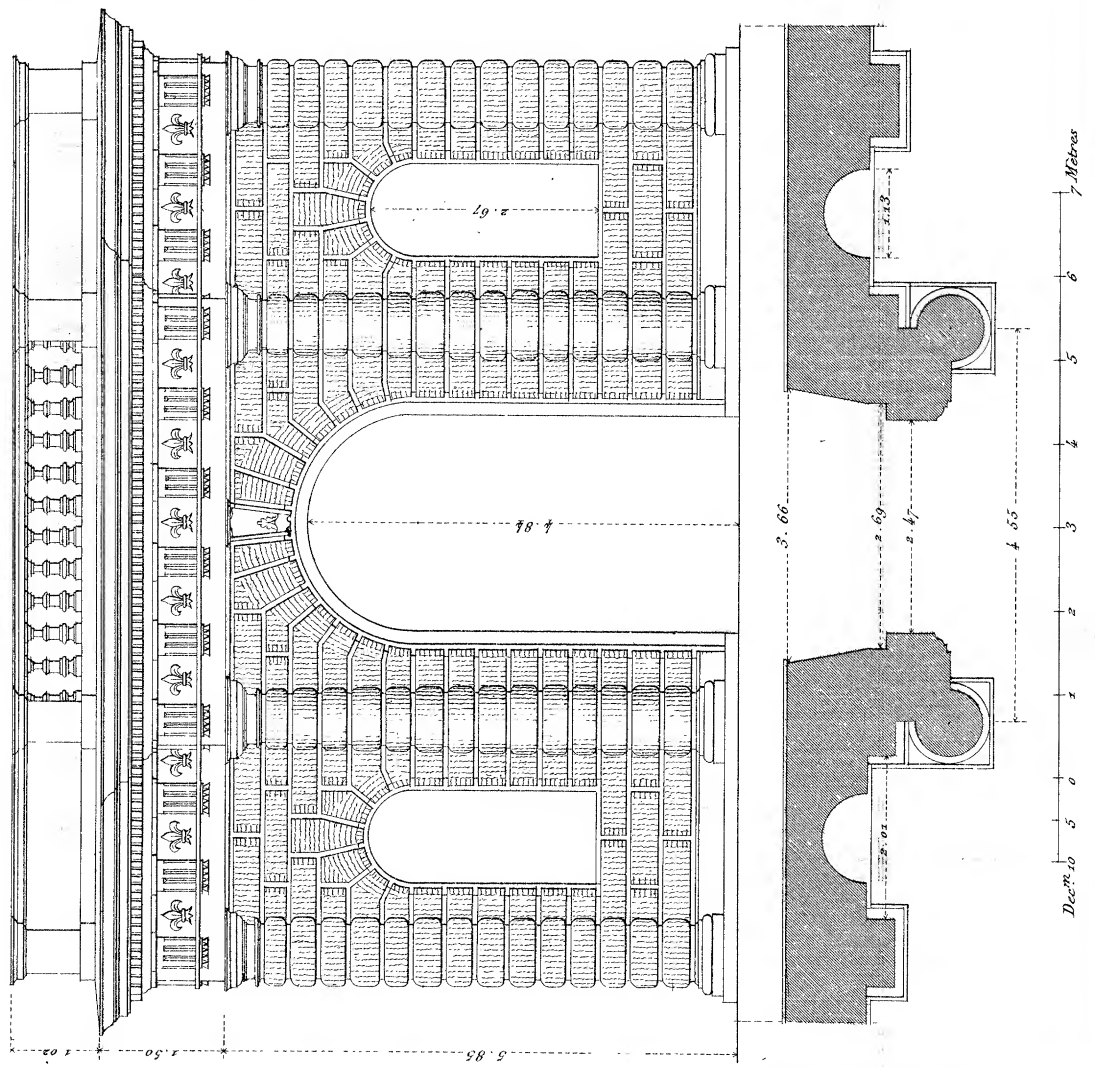
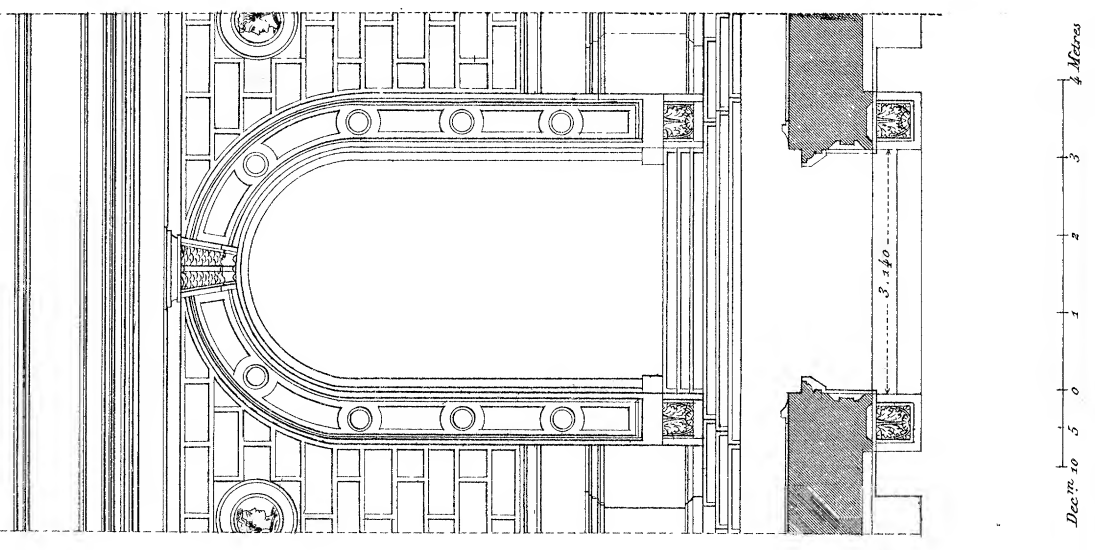


Fig. 2



F. Esquié, del.

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Strassmann, Sc.

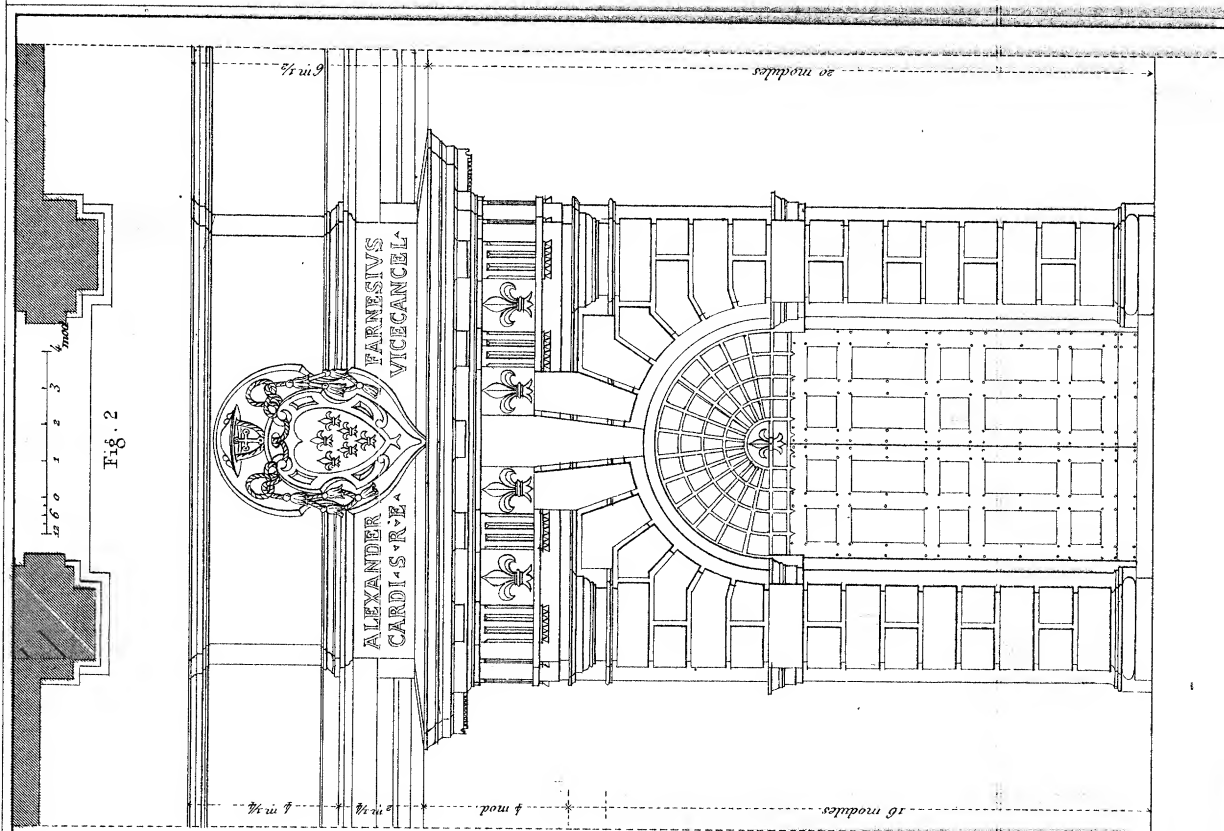
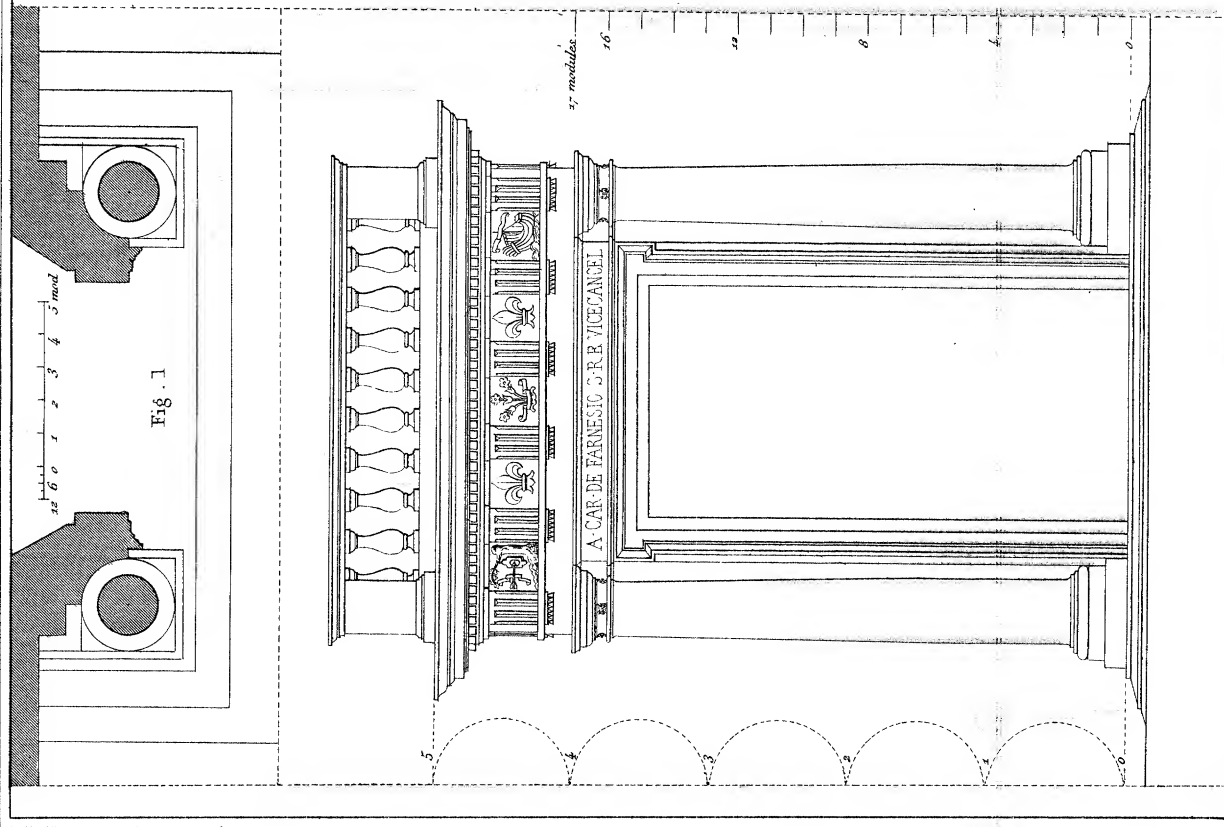
Cette planche représente Fig. 1 la porte d'entrée du Palais National, au Mont Palatin et construite par Vignole en style rustique. La partie supérieure que nous avons supprimée n'était pas due à Vignole. La fig. 2 représente la porte d'entrée des Musées de l'école des Beaux-Arts et dont M. Duban est l'architecte.

PLATE 53

STUDIES OF DOORS

Fig. 1 represents a door intended by Vignola for the Palace of the Cancellaria, but which was never executed. It will be noticed that the width is about equal to half the height. The architrave or frame of the door is about $\frac{1}{8}$ the width of the opening.

Fig. 2 represents the door to the Palace of Caprarola and is also by Vignola. The height of the door is double its width. The pilasters are 8 diameter high and the entablature is one-quarter the height of the pilaster.



P. Enquist, del.

CHARLES SCHMID, EDITEUR, 51, Rue des Écoles, Paris.

La figure 1 représente une porte destinée par Vignole au Palais du Cardinal de Farnesio, et qui ne fut pas exécutée. On remarquera que la largeur égale sensiblement à la moitié de la hauteur. Le chambronnage est environ le huitième de la largeur de l'ouverture.

La figure 2 représente la porte du Palais de Caprarole et est aussi dite à Vignole. La porte a sa hauteur le double de sa largeur, les pilastres ont huit diamètres et l'entablement le quart de la hauteur du pilastre.

Strasman, sc.

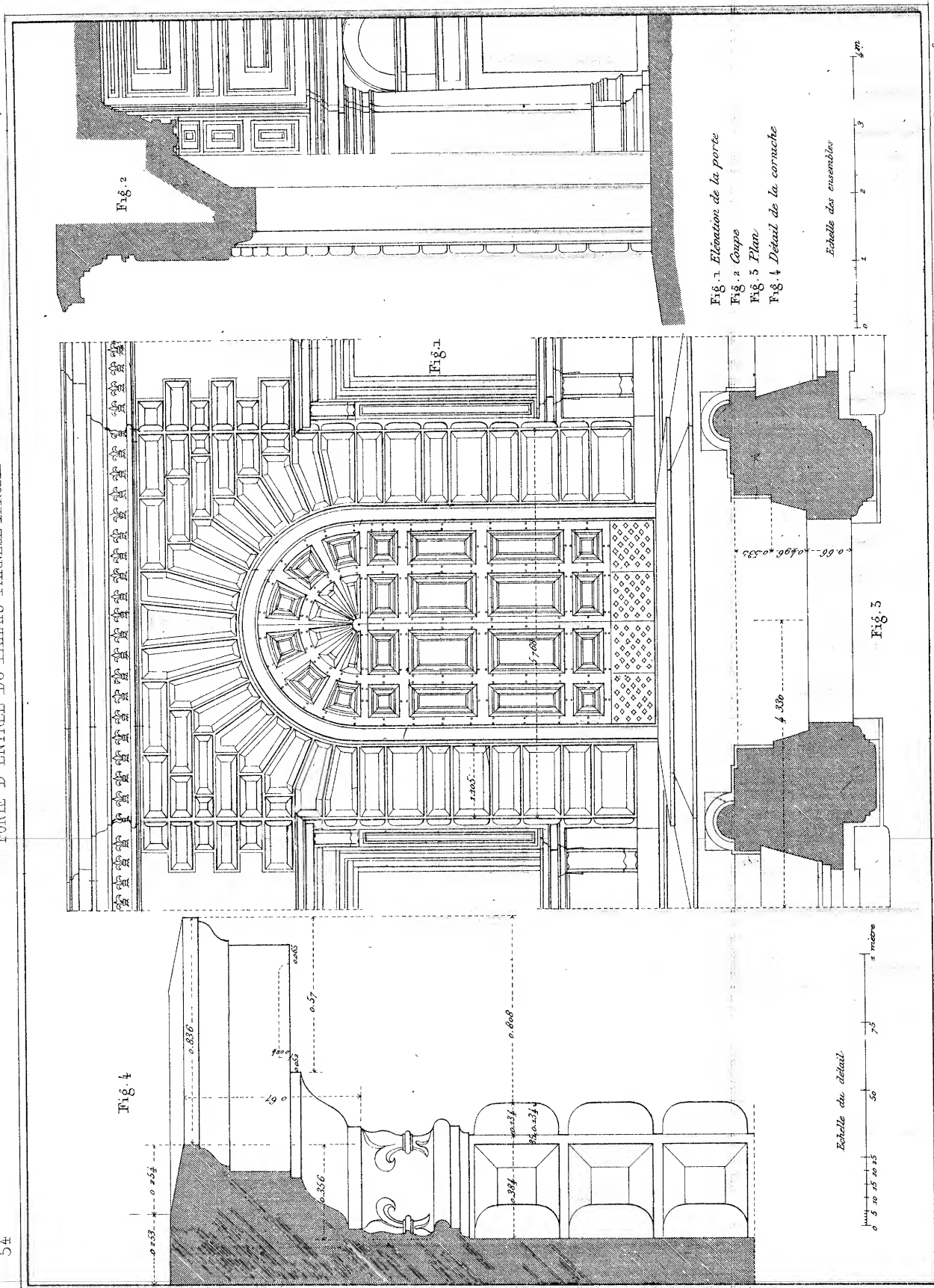
PLATE 55

STUDIES OF DOORS

This plate shows the difference between an interior and exterior door of types that are similar.

Fig. 1 represents a door from the first story of the Farnese Palace executed from the drawings of Vignola.

Fig. 2 represents the entrance door of the church of St. Lorenzo in Damaso (Rome), after Vignola. On account of its richness this door harmonizes very well with the Corinthian order.



P. Esquité del.
 Comme exemple de porte circulaire à bascule, nous donnons l'entrée du Palais Farnèse à Rome. La voûte de la corniche est mutuelle par le balcon en pierre placé au dessus mais dont nous n'avons pas rendu compte dans notre dessin.

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Vermauer, Sc.

PLATE 55

STUDIES OF DOORS

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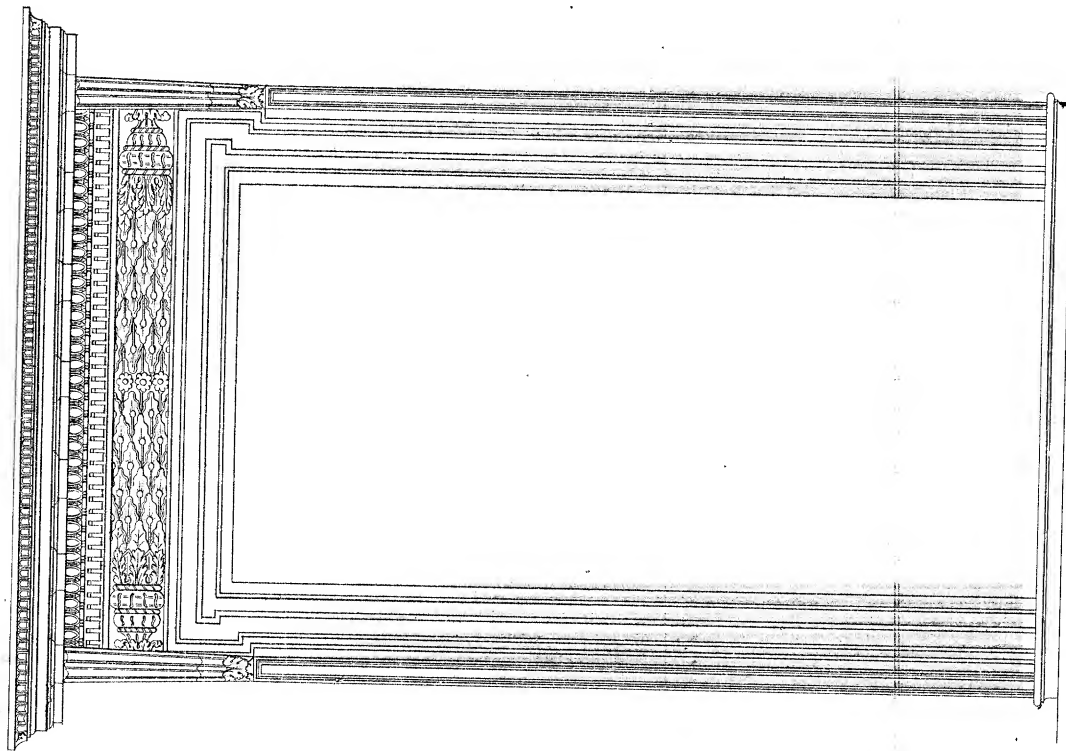
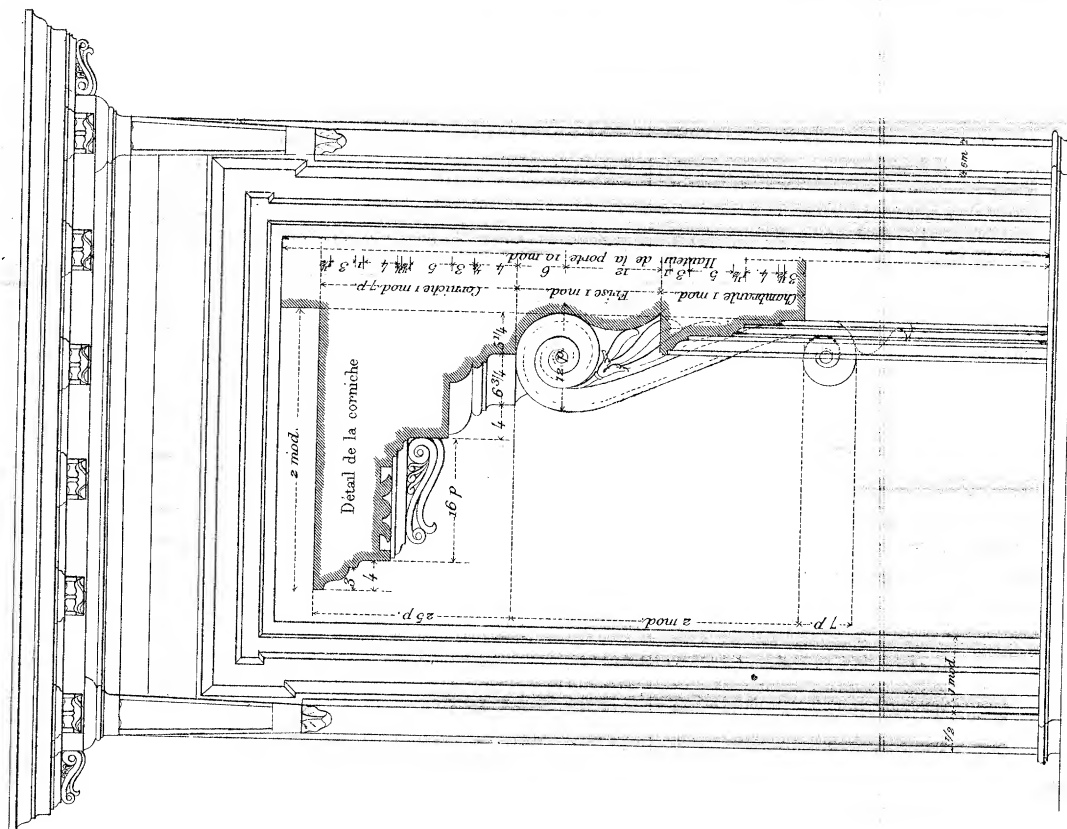
Fig. 1^{ère}

Fig. 2



F. Esquieu, del.

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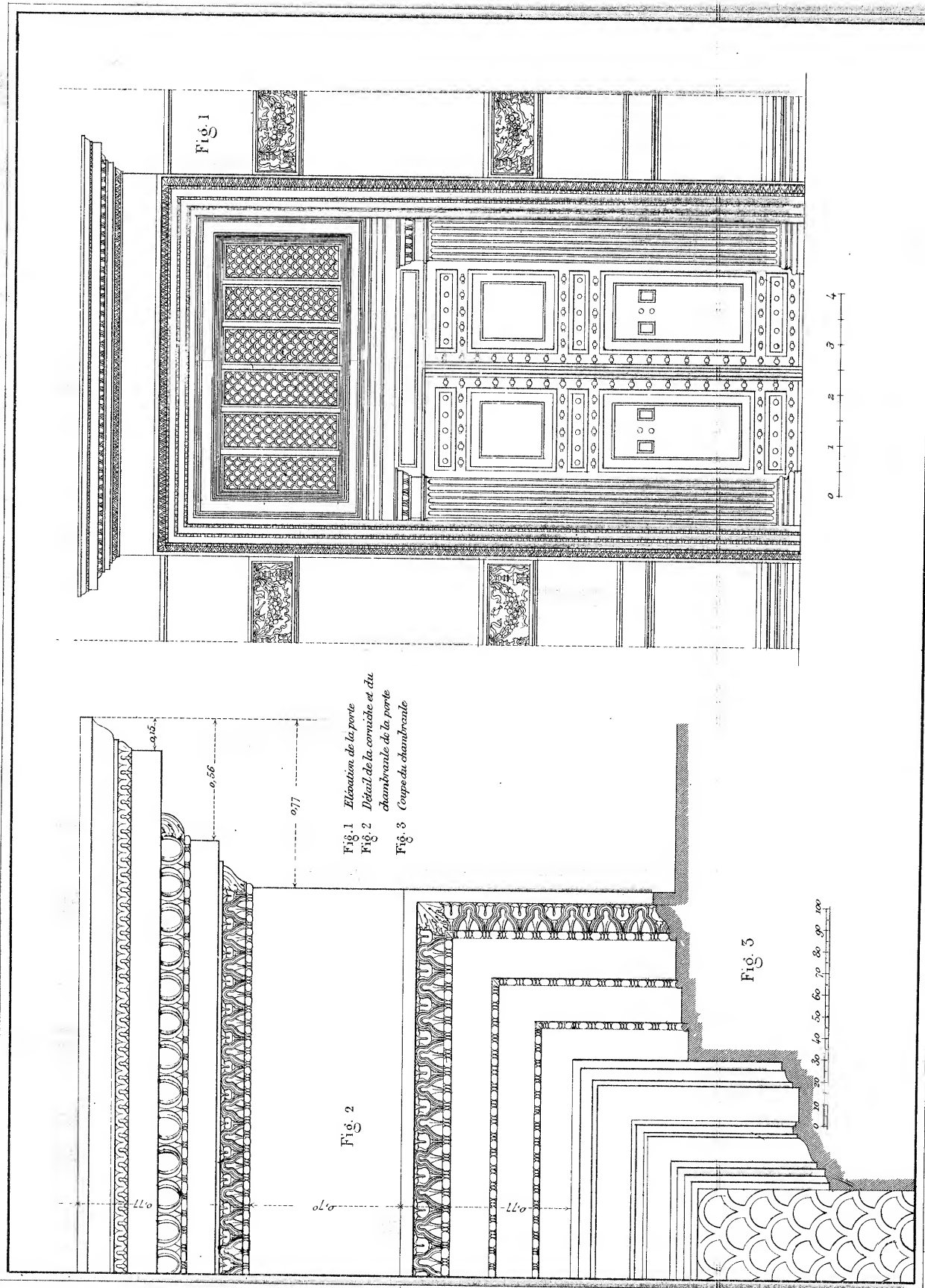
Cette planche montre la différence d'une porte intérieure et d'une porte extérieure de forme à peu près semblable. La figure N°1 représente une porte du 1^{er} étage du Palais National exécutée d'après les dessins de Vignole. La fig N°2 représente la porte d'entrée de l'Église St Laurent in Damaso d'après Vignole. Par sa richesse cette porte s'accorde très bien avec l'ordre corinthien.

Strasman, sc.

PLATE 56

DOOR OF THE PANTHEON AT ROME

This door is a portion of the monument called the Pantheon. It is established that the portico in front of the rotunda, in which this entrance with folding doors in bronze is a part, was constructed in the time of Agrippa.



P. Enquist, del.

CHARLES SCHMID, ÉDITEUR, 51, Rue des Ecoles, Paris.

Cette porte, fin partie du monument dit Panthéon, Il est établi que le portique précitant la retende et dont cette porte avec vantaise en bronze, fin partie, a été construit au temps d'Agrippa.

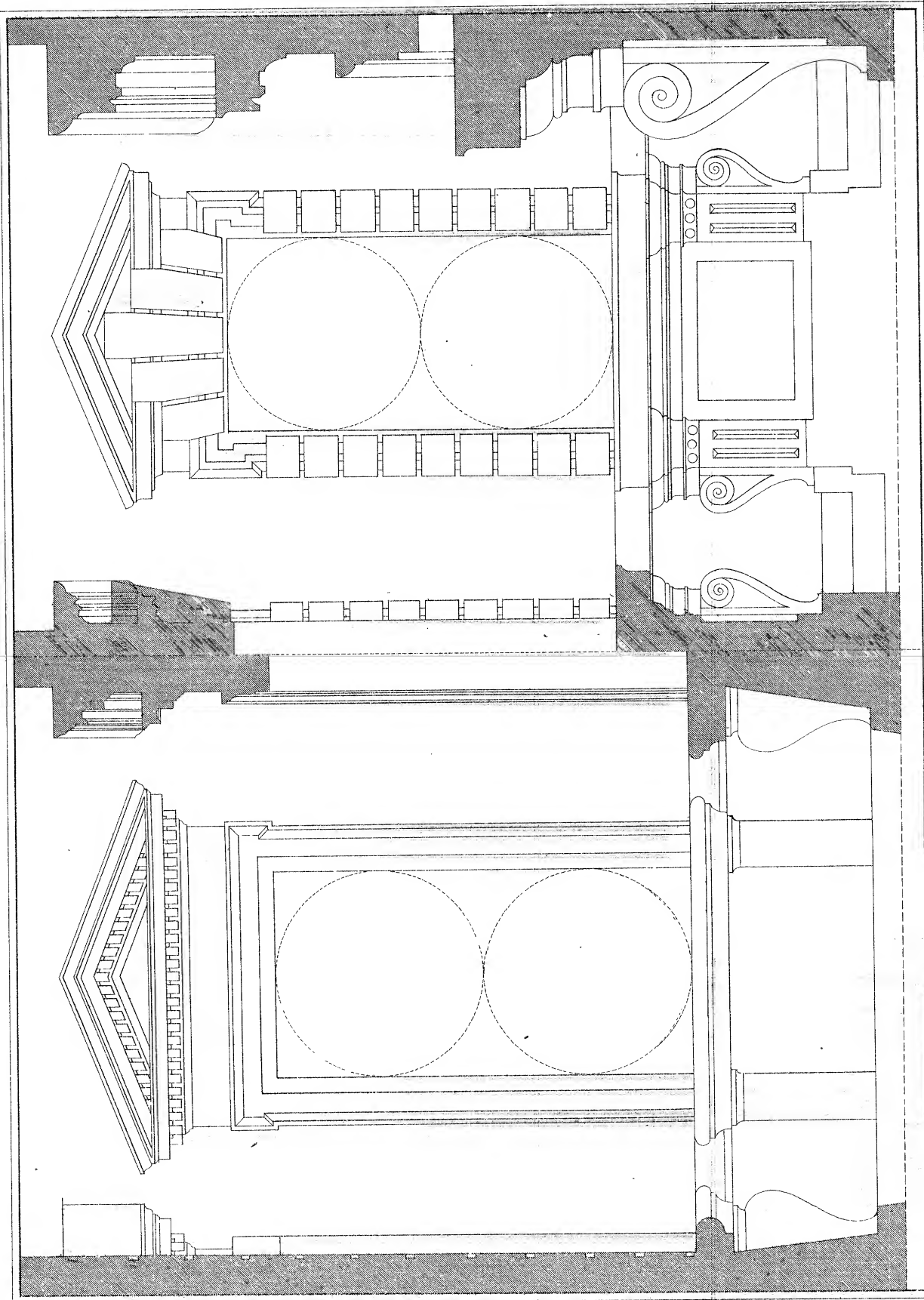
Strasbourg.

PLATE 57

STUDIES OF WINDOWS

In Fig. 1 is shown a window of the rez-de-chausée from the Caprarola Palace. The height is twice the width and the architrave or frame is $2/9$ of the opening.

In Fig. 2 is given an example of a window of the rustic type, located on the rez-de-chausée of the entrance buildings of the Villa of Pope Julius II at Rome. The height is also twice its width.



P. Enquiel del.
 Dans la fig. n° 1 nous avons représenté la fenêtre du rez-de-chaussée du palais de Caprarola, la hauteur est le double de la largeur et la chambre les 2/3 de l'ouverture. Nous donnons fig. 2 un exemple de fenêtre d'ordre rustique située au rez-de-chaussée du bâtiment d'entrée de la Villa du Pape Jules II à Rome. La hauteur est aussi le double de la largeur.

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Strommen, Sc.

PLATE 58

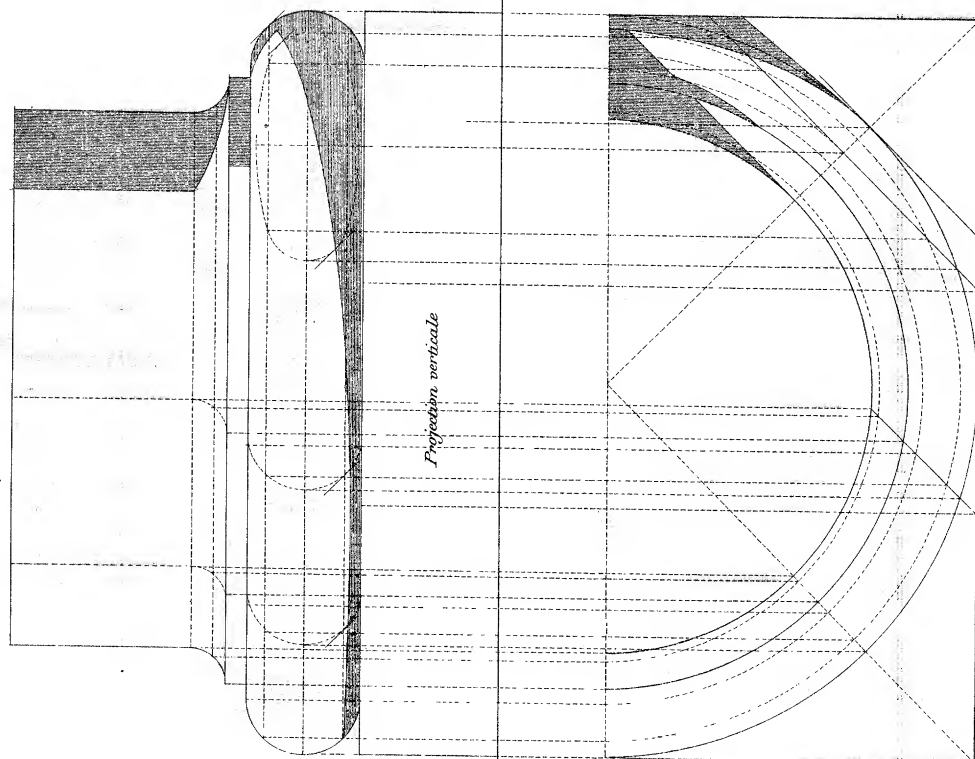
METHOD OF DRAWING THE SHADOWS OF THE
TUSCAN AND DORIC BASES

To obtain the shadows of the Tuscan and Doric bases, it is necessary to cut the bases by vertical planes parallel to the rays of light. In this way the curves of the sections will be obtained by the aid of which, the limits of the shadow and light can be drawn point by point by taking tangents of 45° on them and prolonging the tangents until they intersect with the curves of the section. To obtain these sections by vertical planes at 45° for the curved surfaces, it is necessary to consider the intersections of the vertical planes at 45° with the sections of the same surfaces by the horizontal planes. An examination of the figure will show how it is drawn.

GLOSSARY

Projection horizontale. Horizontal projection.
Projection verticale. Vertical projection.

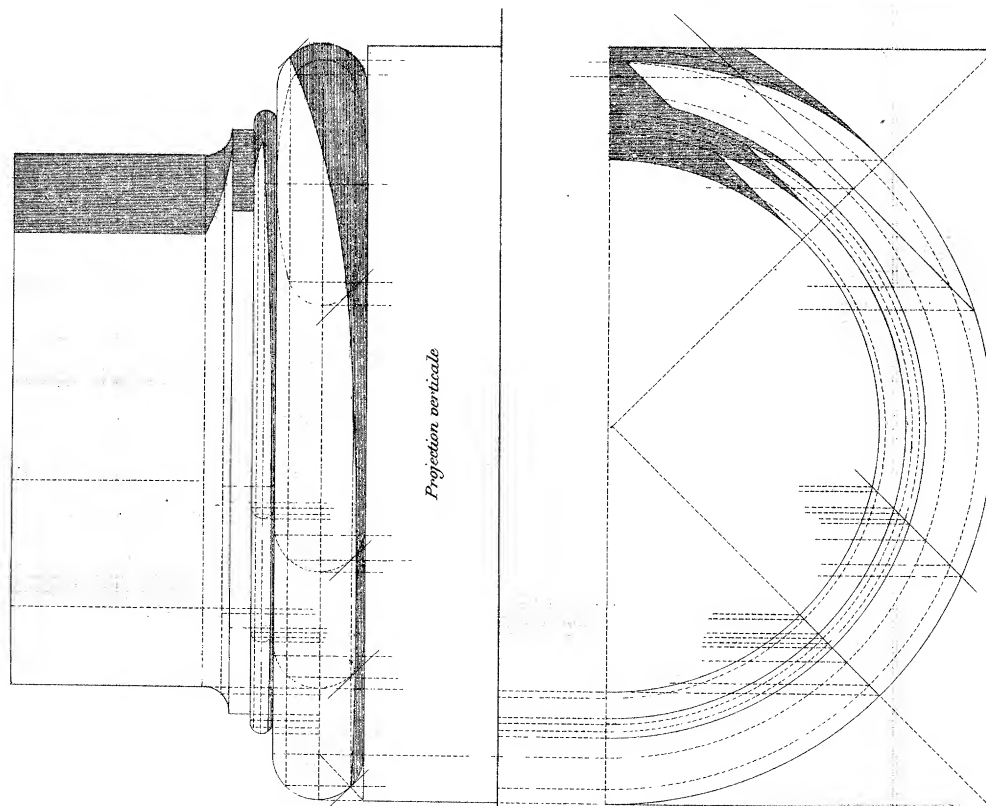
BASE TOSCANE



Projection verticale

Projection horizontale

BASE DORIQUE



Projection verticale

Projection horizontale

P. Esquié, del.

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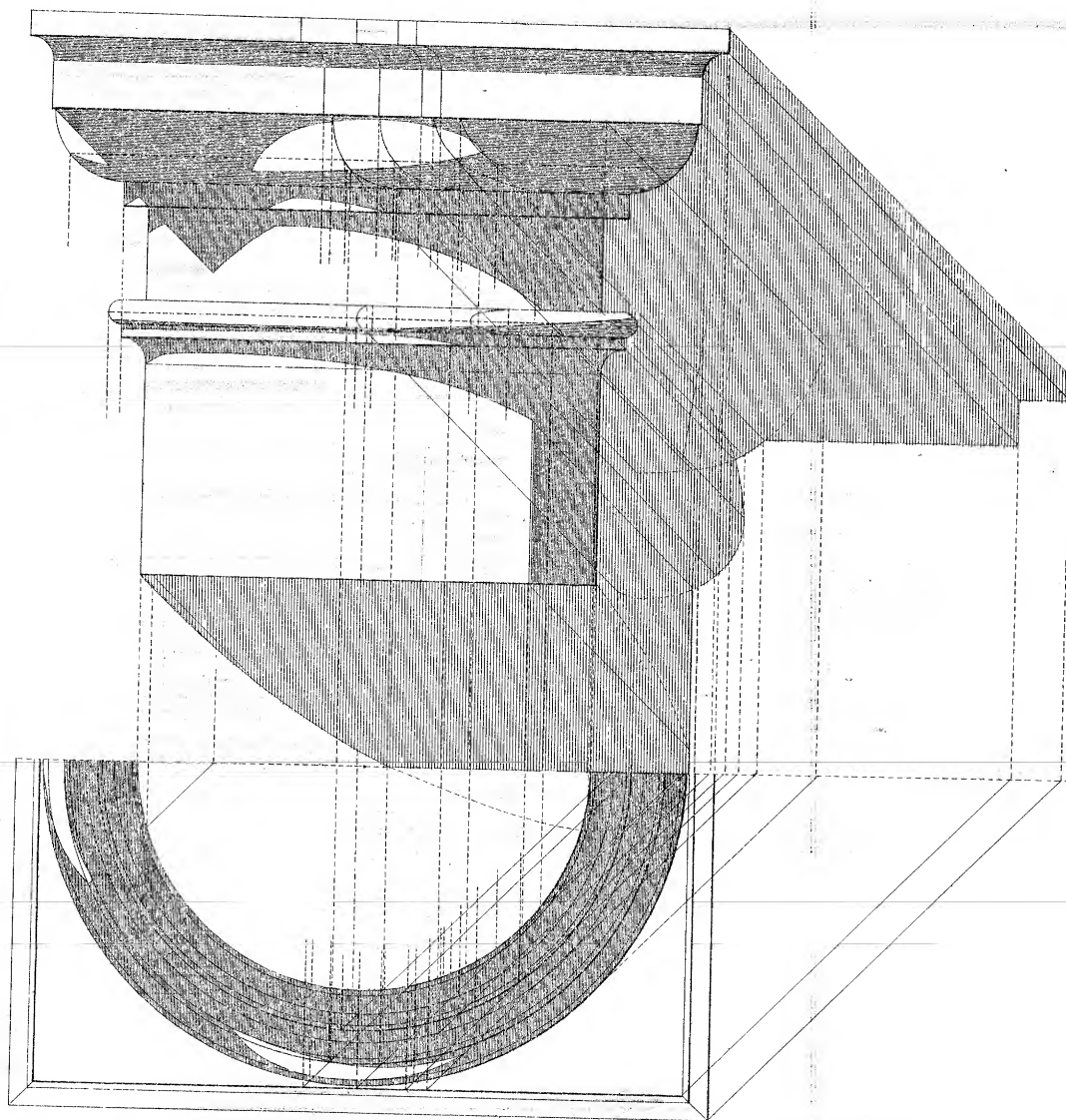
Pour obtenir l'ombre des bases toscanes et doriques il faut couper ces bases par des plans verticaux parallèles aux rayons de lumière, on obtiendra ainsi des courbes de section à l'aide desquelles on pourra tracer point par point les limites d'ombre et de lumière en leur menant des tangentes à 45° et en les prolongeant jusqu'à leur rencontre avec les courbes de section. Pour obtenir ces sections par des plans verticaux à 45° on sera obligé pour les surfaces courbes de considérer les rencontres de ces plans verticaux à 45° avec des sections des mêmes surfaces par des plans horizontaux. L'inspection de la figure fera d'ailleurs comprendre le tracé.

Struemann, sc.

PLATE 59

**METHOD OF FINDING THE SHADOW OF THE
TUSCAN CAPITAL**

To obtain the shadows of the capital the same process is used as for the base—that is to say in using sections by a series of vertical planes cutting the capital parallel to the rays of light. Besides the exact shadows of the capital, those which will be cast by the mass on a vertical plane passing through the axis, are given.

Projection verticale*Projection horizontale**P. Esquié, del.*

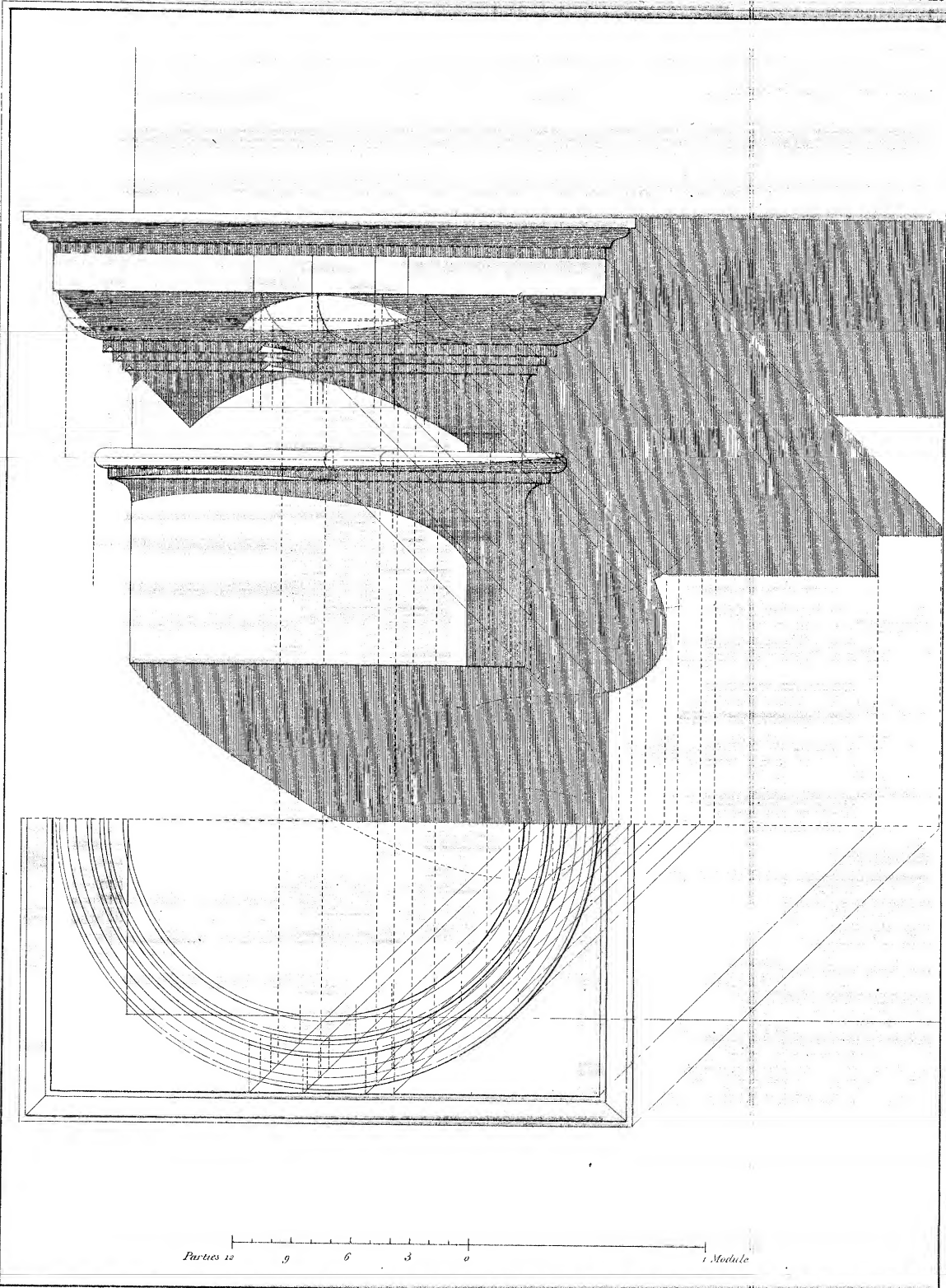
CHARLES SCHMID, ÉDITEUR, 51, Rue des Écoles — Paris.

Strasmann, Sc.

Pour obtenir les ombres du chapiteau on se sert du même procédé employé pour la base. C'est-à-dire en se servant de sections par une suite de plans verticaux coupant le chapiteau suivant le parallélisme du rayon lumineux. Nous avons donné outre les ombres propres du chapiteau, celles qui seraient portées par l'ensemble sur un plan vertical passant par l'axe.

PLATE 60
SHADOW OF THE DORIC CAPITAL

The same method is employed that was used for the Tuscan capital. In this plate the capital surmounted by the architrave would cast a shadow on a vertical plane, parallel to the picture and passing through the axis of the column.



P. Esquié, del.

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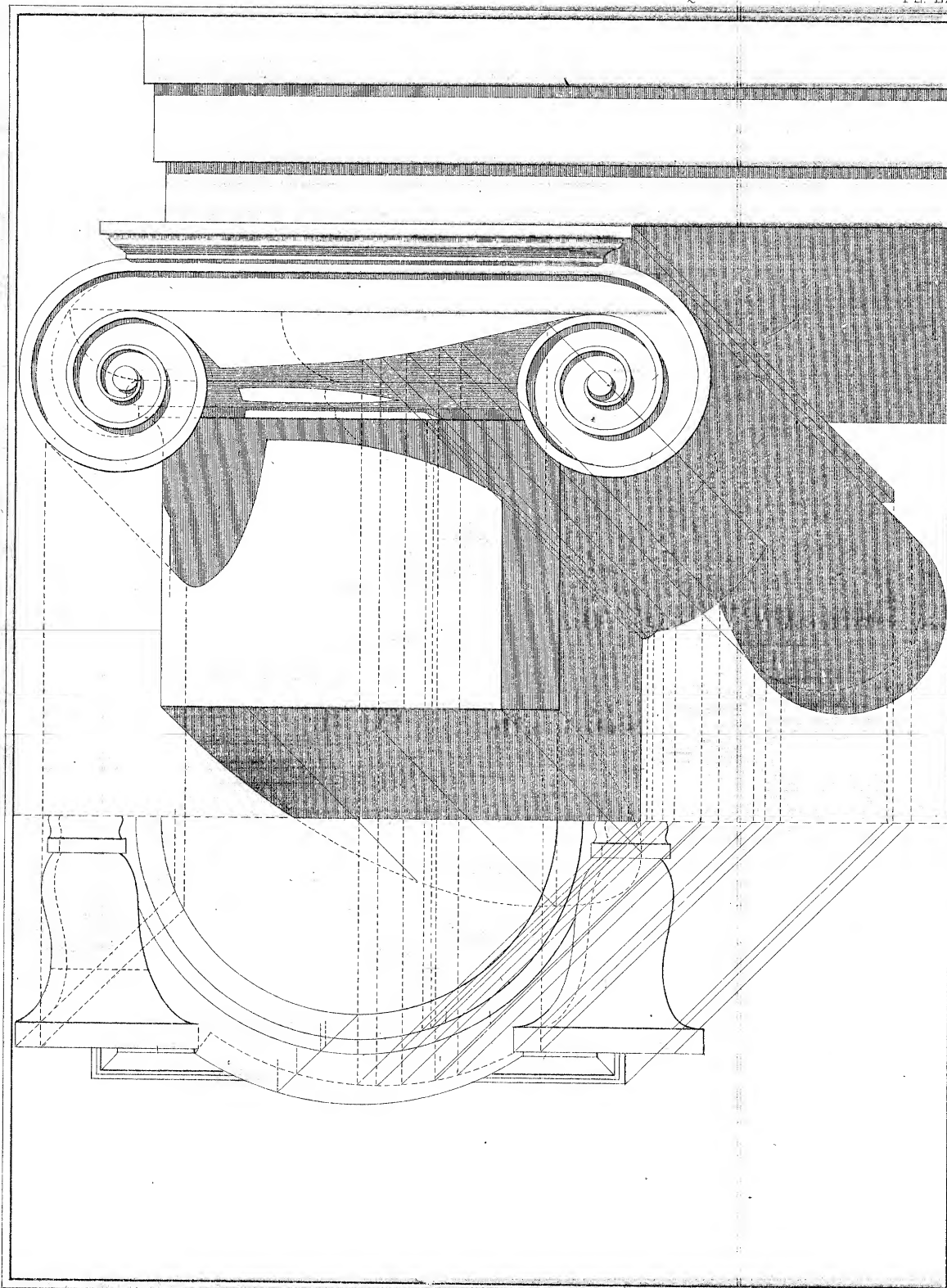
Strassmann & Co.

Même procédé que pour le chapiteau ionique. Le chapiteau surmonté de l'architrave porterait ombre d'après cette planche sur un plan vertical, parallèle au tableau et passant par l'axe de la colonne.

PLATE 61

**STUDY OF THE SHADOW OF THE CAPITAL OF
THE IONIC ORDER**

On this plate is shown the shadows of the Ionic capital seen from the front, and the shadows cast by the mass on a vertical plane parallel to the picture and passing through the axis of the column. The method used to obtain the different points of the shadow is always the same. See plate 60 — Doric capital.



P. Esquié, del.

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Strassmann, sc.

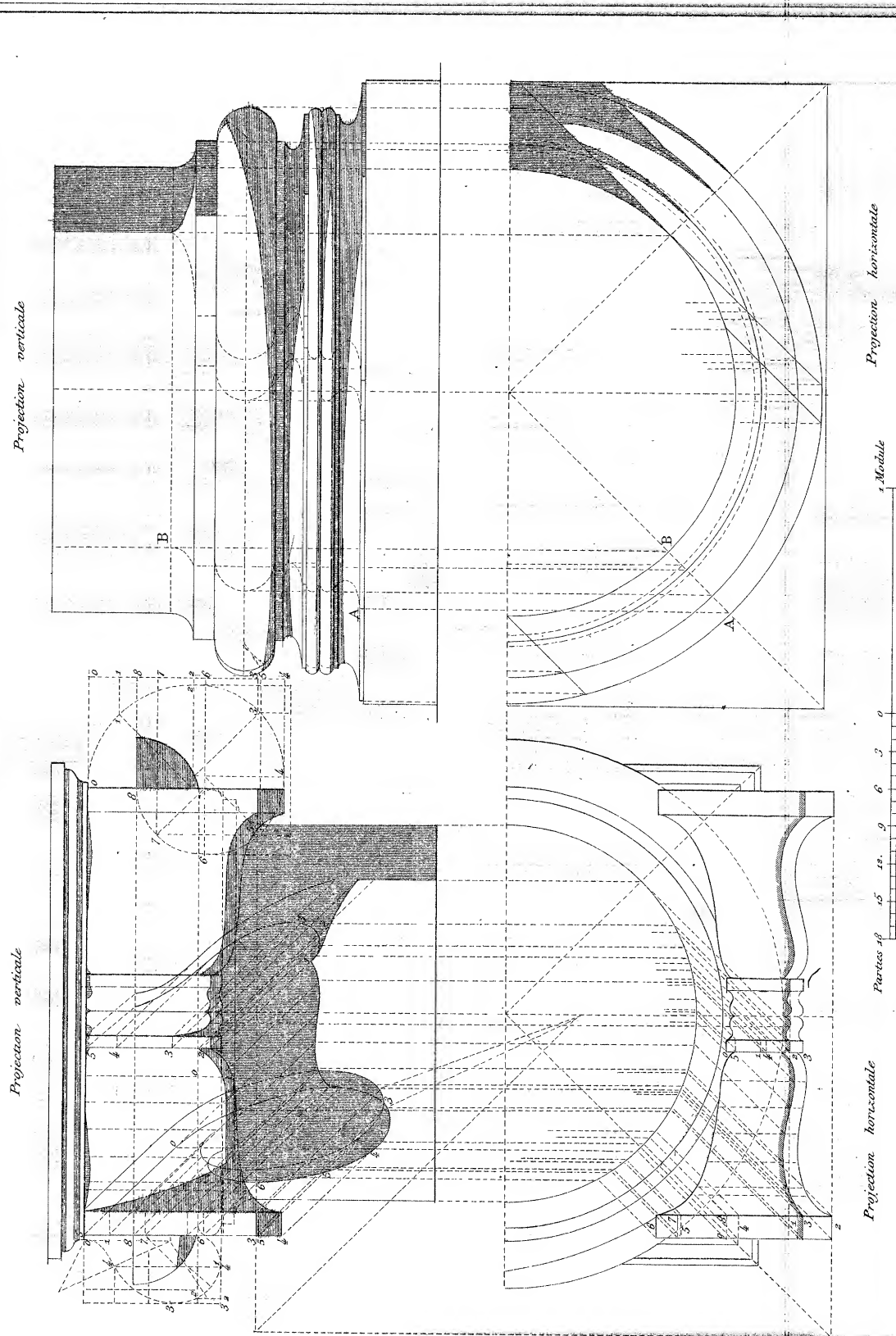
Sur cette planche nous avons indiqué les ombres du chapiteau Ionique vu de face et les ombres portées par l'ensemble sur un plan vertical parallèle au tableau et passant par l'axe de la colonne. La méthode employée pour obtenir les divers points de l'ombre est toujours la même.

PLATE 62

STUDY OF THE SHADOW OF THE BASE AND CAPITAL
OF THE IONIC ORDER IN SIDE ELEVATION

As the limits of the cast shadow on the capital are composed of the expression of the listels of the volute and of the cincture as well as the shade of the cushion itself it is necessary to draw separately the curves of the listels, to obtain in plan the horizontal projections and in elevation the vertical projections of their principal points, as well as those of the shade of the cushion, as indicated by the figures.

For the base it is again necessary to use the method of vertical cuts like AB, on each one of which tangents parallel to the direction of the light will give the limits of the shadows of the convex surfaces and the secants those of the shadows cast on the concave surfaces.



P. Esquié, del.

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Strasbourg, Sc

Pour le chapiteau comme les limites de l'ombre portée se composent de l'expression des bords de la volute et de la retraite, ainsi que de l'ombre propre du croissant, il a fallu tracer séparément les courbes des bandeaux pour obtenir en plan les projections horizontales, et en élévation les projections verticales de leurs principales parties, ainsi que de l'ombre propre des volutes comme il est indiqué par les chiffres.

Pour la base, il faut encore employer la méthode des tranches verticales comme A.B. sur chacune desquelles les tangentes parallèles à la direction de la lumière donneront les limites des ombres propres des surfaces convexes et les sécantes, celles des ombres portées sur les surfaces concaves.

PLATE 63

STUDIES OF SHADOWS OF THE CORINTHIAN CAPITAL

The shadow in Fig. 1 is obtained by making a series of sections by vertical planes parallel to the direction of the light.

For Fig. 2 it is necessary to study separately the shadow of each of the ornaments of the capital in order to arrive at the exact comprehension of the general shadow. The final result only, is given here.

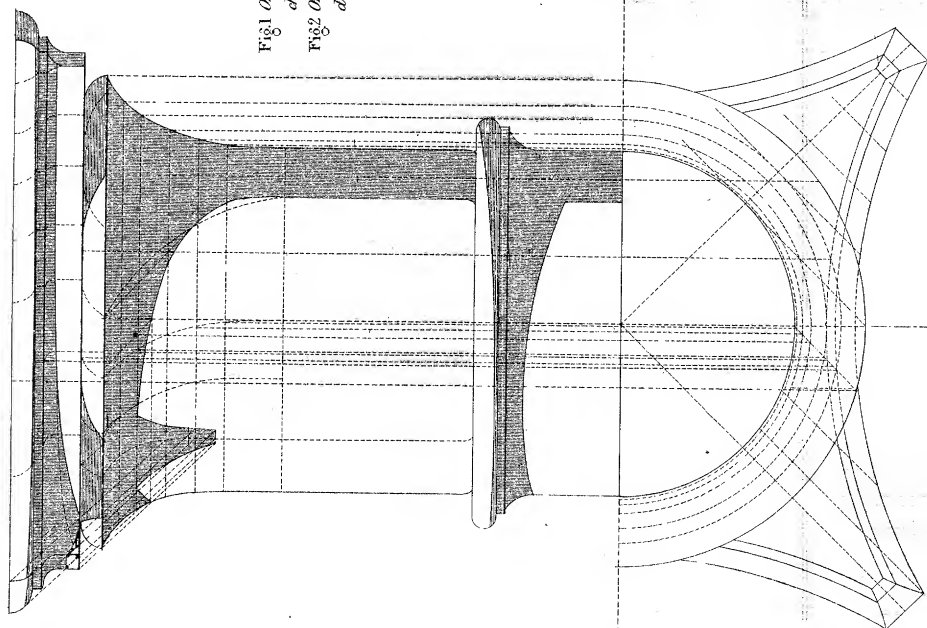
Fig. 1^{re}

Fig. 2

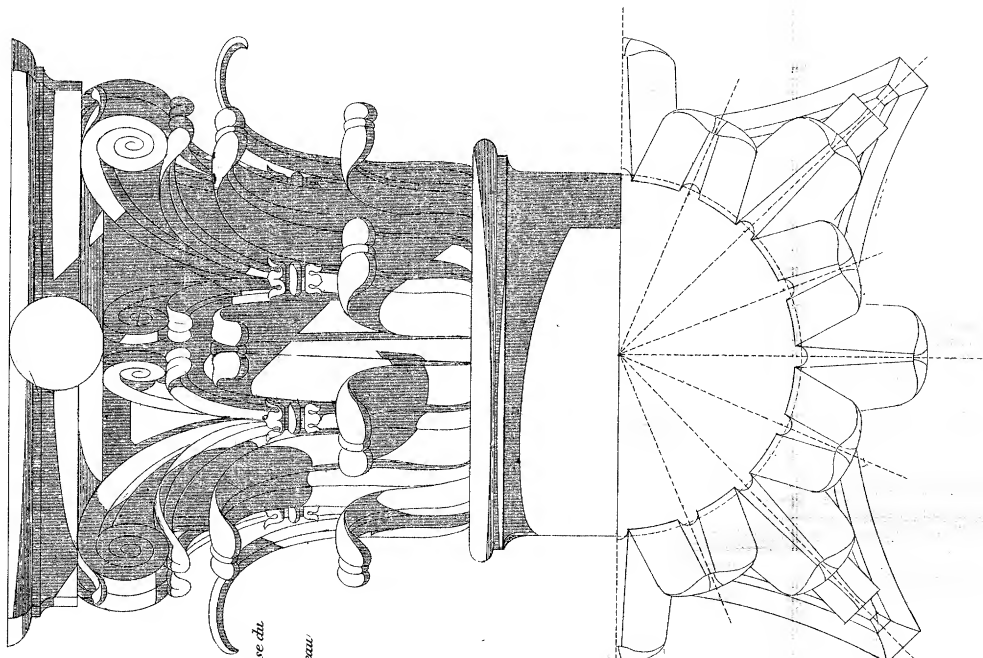


Fig. 1 Ombres du tailloir et du vase du
chapiteau corinthien

Fig. 2 Ombres complètes du chapiteau
d'ordre corinthien

P. Engré, del.

CHARLES SCHMID, ÉDITEUR, 31, Rue des Ecoles, Paris.

On obtient l'ombre de la figure 1 en faisant une série de sections par des plans verticaux parallèles à la direction de la lumière. Pour la figure 2 il faut d'abord tracer l'ombre de chacun des ornements du chapiteau afin d'arriver à la connaissance exacte de l'ombre générale. Nous n'en donnons ici que le résultat, final.

Worms, 30.

PLATE 64

DRAWING OF THE SHADOWS OF MODILLIONS AND OF A PEDIMENT

To determine the shadows cast by a cornice first draw the lines A C and B D, then the horizontal lines C E', D G' then taking lines at 45° through the points E F G, the points E' F' G', will be obtained.

To draw the shadow of the pediment, first determine the lines M' P, O N, R S, X Y by making sections with vertical planes parallel to the rays of light. The outline of the shadows will be obtained by proceeding the same way as for the cornice.

For Fig. 2 the method is the same, only it will be necessary to find a greater number of points to obtain the curves.

Pour déterminer les ombres portées par la corniche on tracera d'abord les lignes AC et BD puis les lignes horizontales CE, D'G' puis en menant des lignes à 45° par les points E F G on obtiendra les points E' F' G'.

Pour tracer l'ombre du fronton on déterminera d'abord les lignes MP, ON, RS, XY en faisant des sections par des plans verticaux parallèles aux rayons lumineux on obtiendra ensuite les limites d'ombres en procédant comme pour la corniche.

Pour la fig 2 le procédé est le même, on aura seulement à chercher un plus grand nombre de points pour obtenir les courbes.

Fig.2

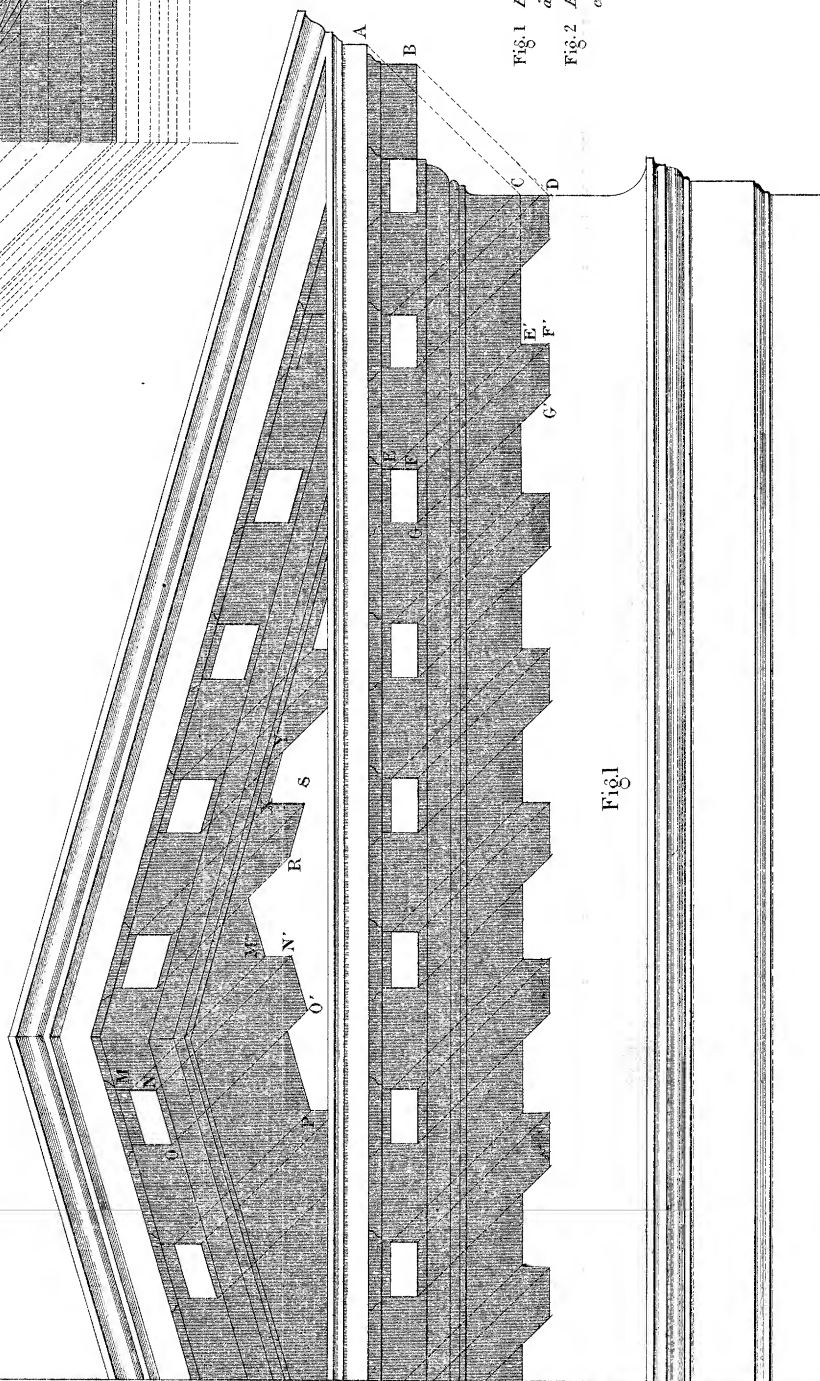
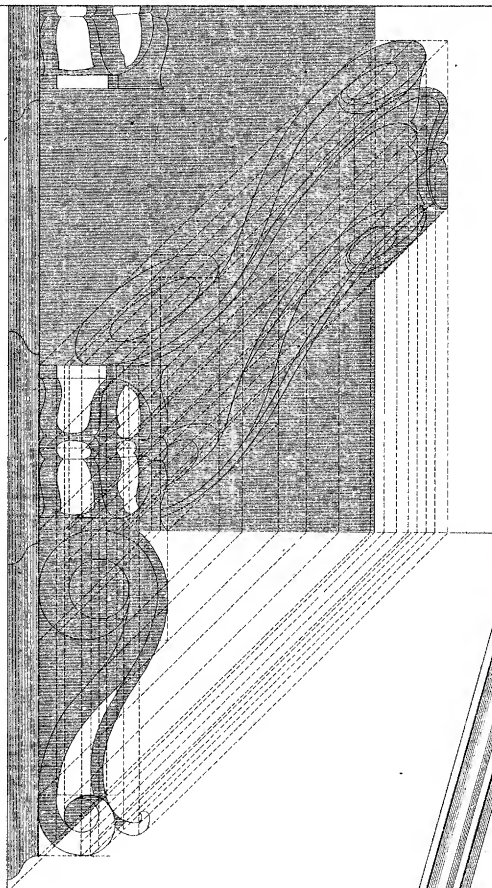


Fig.1

Fig.1 Etude des ombres portées d'un fronton à modillons

Fig.2 Etude des ombres d'une corniche d'ordre corinthien

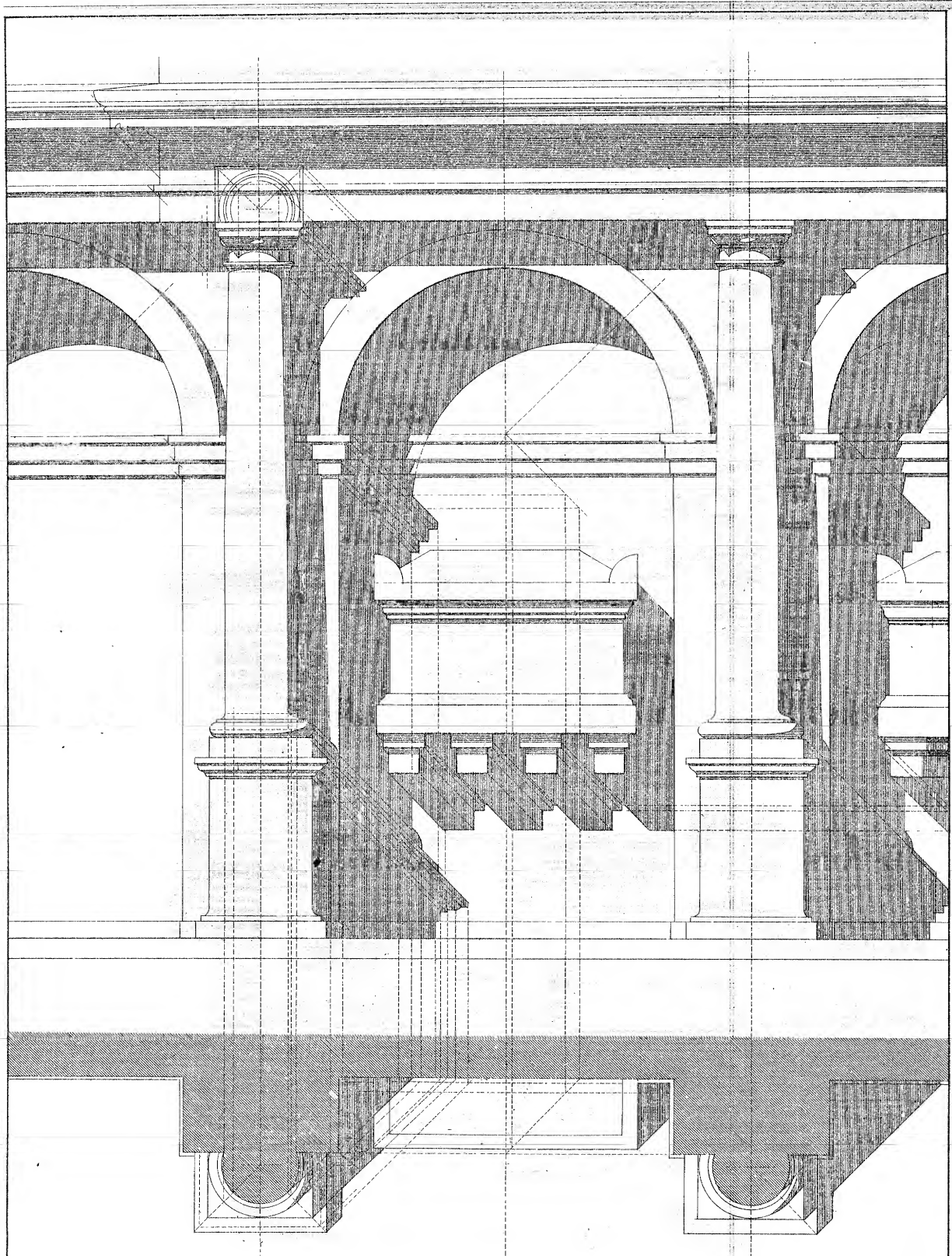
PLATE 65

SHADOWS OF THE TUSCAN PORTICO WITH PEDESTAL

The shadows cast by this portico are obtained by taking lines at 45° through all the points that fall in a plane, and which can cast shadows, to the planes upon which the shadows would fall.

From these points erect vertical lines through the intersections of which, with the lines at 45° , drawn from corresponding points of the elevation the necessary points of the shadows will be obtained.

For detail of the shadows cast by the capital, it will be necessary to refer to the detail given.



On obtient les ombres portées de ce portique en menant des lignes à 45° par tous les points pouvant porter ombre que l'on arrêtera dans le plan aux plans sur lesquels les ombres doivent se projeter. De ces points on élèvera des verticales dont les intersections avec les lignes à 45° tirées des points correspondants de l'élévation donneront les points successifs des ombres à obtenir. Pour le détail des ombres portées par les chapiteaux on se reportera au détail donné.

PLATE 66

STUDY OF THE SHADOWS OF THE IONIC ARCADE WITH PEDESTAL

The shadows of this arcade are obtained by the same method used in the preceding plates. We have further indicated the shadow of a niche, and in order to obtain this shadow we must draw through the center O of the circle which forms the niche, a line at 45° which intersects this circle at two points A and B; perpendicular to this line and through the center of the niche we draw the line O C, which meets a line I H (parallel to A B, at the point C, which will be the center of a circle of the same diameter as the niche; then with the point D as center and the radius D E we describe an arc of a circle as far as the meeting with the line F D G, which is itself parallel to A B; then at the point F we erect a perpendicular to F G, which will meet the line I H at the point I, and join these points I and D by right line; this line, which is the diagonal of a cube of which the side is equal to the radius of the niche, is the direction of the ray of light in the revolved plane.

Having completed this first operation, it is necessary to project the point A upon the line P Q in plan at the point A' then through the point draw a line at 45° , A' B' which meets the circle of the plan of the niche at the point B'; erect at this point a perpendicular which will meet the line A B of the elevation at the point M; this point will be one of the points of the shadow. From the point M draw a line parallel to O C to meet the circle of the revolved plane at the point N; join the points N and C by a right line; this right line will be the projected contour of the shadow upon the sphere of the niche in revolution. We now take points a b c, through which pass lines at 45° parallel to A B; then from these points let fall perpendiculars to the line I H which meet it at the points a' b' c' through these points draw parallels to the ray of light I D; these lines will cut the line of shadow N C at the points a'' b'' c'' which will be, in that plane, shadows cast by the points a b c, in the sphere of the niche.

To obtain these points in elevation, draw through the points a'' b'' c'' parallels to O C, to intersect with lines drawn at 45° through the points a b c in elevation; the intersection of these lines will give points of the shadow; by passing a curve through these points we find the portion of the shadow of the niche as far as the point M. Notice that this curve is a portion of an ellipse. To obtain the rest of the curve which forms the shadow, take other points, d e f, through which draw new lines at 45° , then project these points upon the line P Q in plan at the points d' e' f'; through these projected points draw parallels to A' B' to meet the circle indicating in plan the back of the niche; at these points upon the circle raise perpendiculars, which will cut the lines at 45° drawn from the corresponding points in elevation. These intersections will give the last points of the second part of the curve of the shadow.

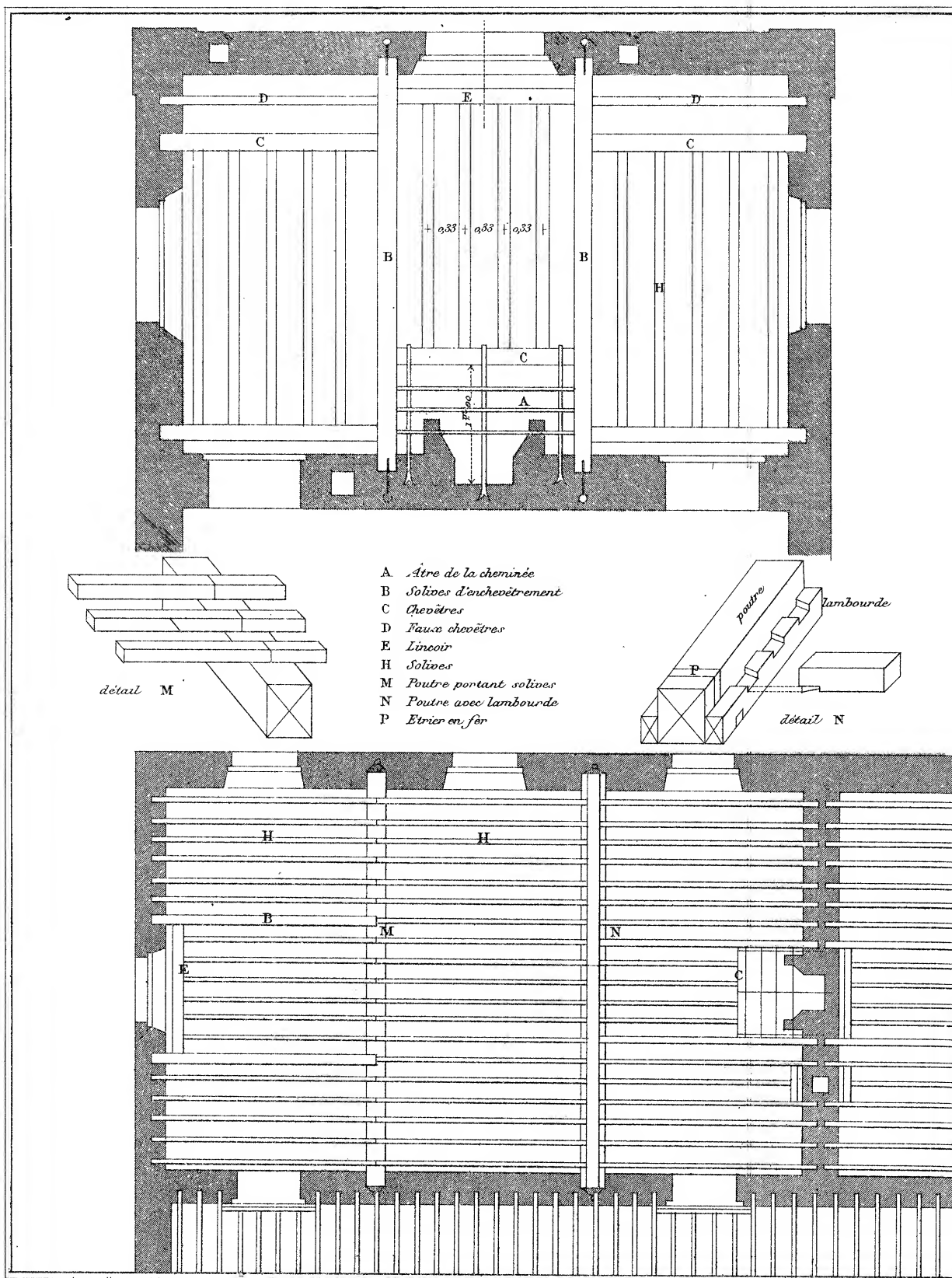
*The letters d' e' f' in plan have been omitted from the plate, through oversight on the part of the engraver.

PLATE 67
FLOOR CONSTRUCTION IN WOOD

When timbers are placed horizontally to separate the different stories of a building and support the floors it is called framing. The floors are composed of three parts, first the ceiling, second properly called the frame work, and third, the tile floor or parquet floor. When the room is small in dimensions only joists are used, which are generally spaced 0.33 of a meter on centers. When the space is larger the joists are carried by heavier members which are called beams. They should have at least 0.25 of a meter bearing in the wall; the dimensions of the timbers are proportioned to the loads which they carry—for the proper conservation of the timber, they should be isolated as much as possible from the masonry, and have the least amount of bearing necessary. Two examples of floor construction, which are generally used, with their arrangement of members, are given.

GLOSSARY

Atre de la cheminée. Hearth.	Poutre portant solives. Beams supporting joists.
Chevetres. Trimmers.	Solives. Joists.
Etrier en fer. Iron stirrup.	Solives d'enchevetrement. Trimmer joist.
Faux Chevetres. False trimmers.	
Lincoir. Trimmer.	
Poutre avec lambourde. Beam with bearing plate for joists.	



P. Esquié, del

CHARLES SCHMID, EDITEUR, 51, Rue des Ecoles - Paris.

Straumann, Sc.

On nomme planchers des pons de charpente qui se placent horizontalement pour séparer les différents étages d'une construction et en supporter les aires ou parquets, les planchers se composent de 3 parties 1° le ptyfond, 2° la charpente proprement dite 3° le carrelage ou parquet, lorsque la pièce est de petite dimension, on n'emploie que les solives, que l'on espace généralement de 0,33 d'axe en axe. Lorsque l'espace est plus considérable, on fait porter les solives par des pièces plus fortes, qui portent le nom de poutres. Elles doivent avoir au moins 0,25 de prise dans le mur, les dimensions des bois sont proportionnées aux charges à supporter - pour la bonne conservation des bois il faut les isoler autant que possible des maçonneries et les enfermer le moins possible - Nous donnons deux exemples de planchers avec les dispositions principales en l'encadrant.

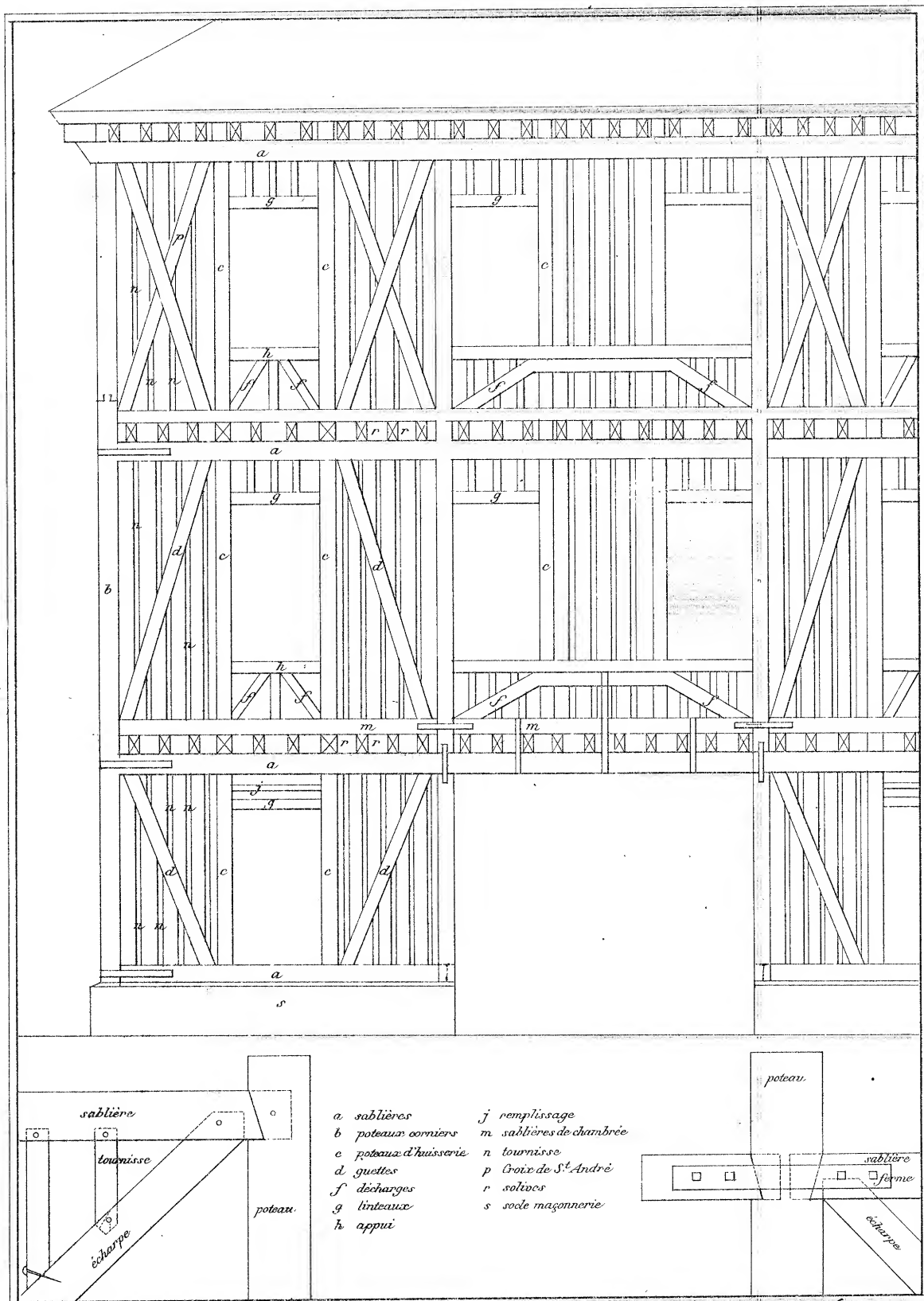
PLATE 68
EXTERIOR FRAME OF WOOD

Timber* frames, although less stable, are used to take the place of masonry walls. The interior frame does not differ from the exterior frame except in thickness, which is lighter for the interior. For a wood frame 4 meters high, 0.25 of a meter is given to the corner posts; 0.15 of a meter to those that frame the door and windows, and from 0.10 to 0.12 of a meter to those that fill in between. When the frame is three or four stories high the corner posts are from 0.25 to 0.30 of a meter and the wall plate from 0.20 to 0.25 of a meter. The frame is sometimes filled by boards, sometimes by brick, if the timber frame is to remain exposed, sometimes by rubbish held in place by laths, if the spaces between the timber frame are to be plastered. The best method is to allow the timber frame to be exposed.

Appui. Window sill.
Croix de St. André. St. Andrews cross.
Décharges. Relieving brace.
Guettes. Diagonal braces.
Linteaux. Lintels.
Poteau d'huisserie. Window or door post.

Poteaux corniers. Corner posts.
Remplissage. Filler.
Sablières. Foundation plates.
Sablières de chambrée. Wall plate.
Socle maçonnerie. Masonry plinth or foundation.
Solives. Joist.
Tournisse. Studding.

*This description refers particularly to French Half Timber Construction.



P. Esquis, del.

CHARLES SCHMID, EDITEUR, 51 Rue des Ecoles, Paris

Strasman, sc.

Les pans de bois avec une stabilité moindre sont employés pour remplacer les murs. Les pans de bois intérieurs ne diffèrent de ceux extérieurs que par l'épaisseur qui est plus faible pour les intérieurs. Pour un pan de bois de 4^m 00 de hauteur on donne 0,25 aux poteaux corniers, 0,15 à ceux d' huisserie et de 0,10 à ceux de remplissage. Lorsque les pans de bois s'élèvent de 3 à 4 étages les poteaux corniers ont de 0,25 à 0,30 et les sablières de 0,20 à 0,25. Le pan de bois est rempli soit par des lames de bois, soit par des briques s'il doit être apparent, soit par des plâtres maintenus par des lattes s'il doit être enduit. Le mieux est de laisser les bois apparents.

PLATE 69
WOOD TRUSSES FOR GABLE ROOFS

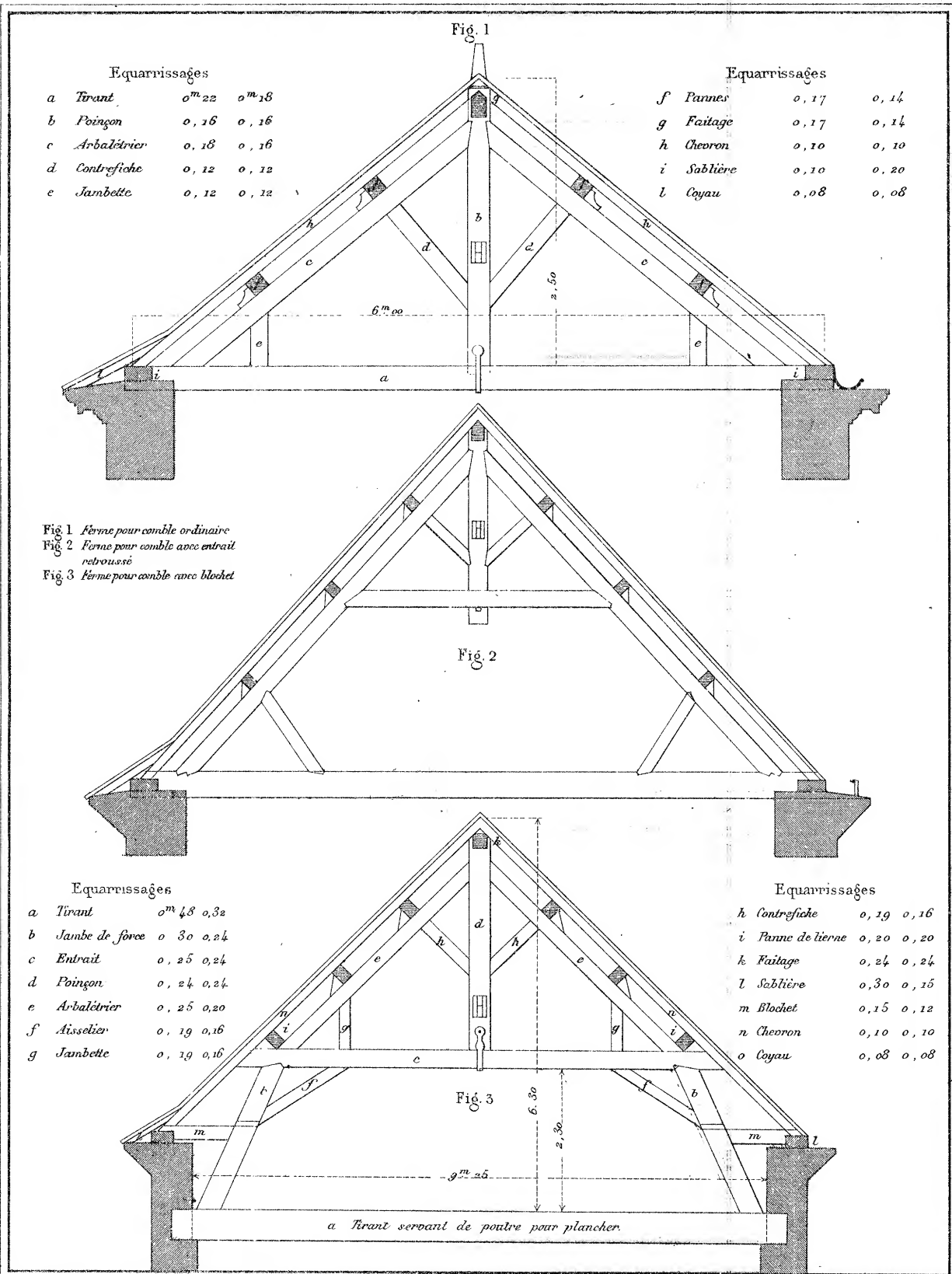
The part situated above a building and on which is placed the cover intended to protect it against the inclemency of the seasons is called a roof.

To carry this covering it is necessary to place at various points (about every 4 or 5 meters) wood or iron frames which are called trusses. The design of these trusses varies according to their uses, the material employed for the cover and the climate. Three examples are given for gable roofs.

GLOSSARY

Aisselier. Brace.
Arbalétrier. Principal rafter.
Blochet. Blocking.
Chevron. Rafter.
Contrefiche. Strut.
Coyau. False rafter.
Entrait. Bottom chord.
Faitage. Ridge piece.

Jambette. Stanchion.
Jambe de force. Counter-brace.
Panne de lierne. Purlin.
Pannes. Purlins.
Poineon. King post.
Sablière. Wall plate.
Tirant. Tie beam.



P. Equier, del.

CHARLES SCHMID, EDITEUR, 51, Rue des Ecoles Paris.

Strassmann, sc.

On nomme comble la partie située au dessus d'un édifice et sur laquelle on applique la couverture destinée à la garantir contre les intempéries des saisons. Pour porter cette couverture il faut établir de distance en distance (tous les 4 à 5 mètres environ) des assemblages de bois ou de fer que l'on nomme Fermes. Les dispositions de ces fermes varient suivant les besoins, les matériaux employés pour la couverture et le climat. Nous donnons ici trois exemples pour combles droits.

PLATE 70

PRINCIPAL TYPES OF MANSARD ROOFS

Mansard trusses are spaced like other trusses in general, from 4 to 5 meters apart. When roofs like Figs. 1, 2 and 3 are used for dwellings the braces are omitted and replaced by iron angles (gusset plate). The tie beam then receives a series of wood strips placed about 0.33 of a meter on centers, and a framing of pieces about 0.17 x 0.07 meters on which the laths that receive the plaster are nailed.

GLOSSARY

Aisselier. Knee brace.
Arbalétrier. Principal rafter.
Chantignolle. Wooden block.
Coyau. False rafter.
Entrait. Collar beam.
Faitage. Ridge piece.

Jambe de force. Counter-brace.
Jambettes. Stanchions.
Pannes de brisis. Angle purlins.
Poinçon. King post.
Sablière. Wall plate.
Tirant. Tie beam.

Fig. 1. 2. 3. Tracés divers de combles à la Mansard avec entrail inférieur.

Fig. 4. Comble à la Mansard sans entrail inférieur.

Fig. 1.

- | | |
|------------------|--------------------|
| a tirant | g jambettes |
| b jambe de force | i pannes de brisis |
| c entrail | k faîtage |
| d poinçon | l sablière |
| e arbalétrier | m coyau |
| f aisnières | n échantignolle |

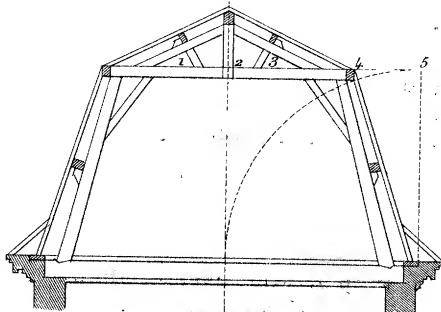
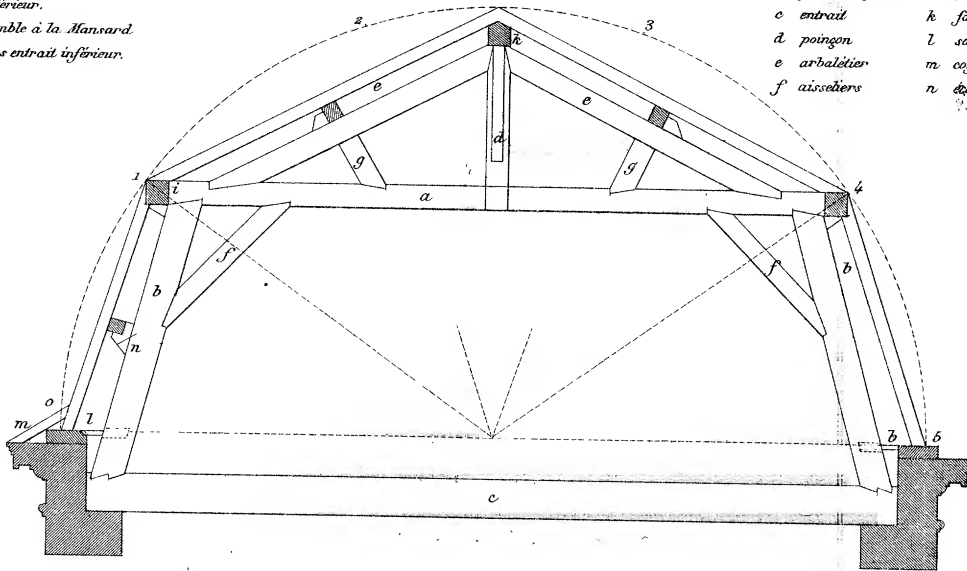


Fig. 2.

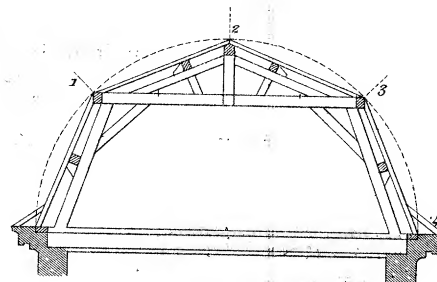


Fig. 3.

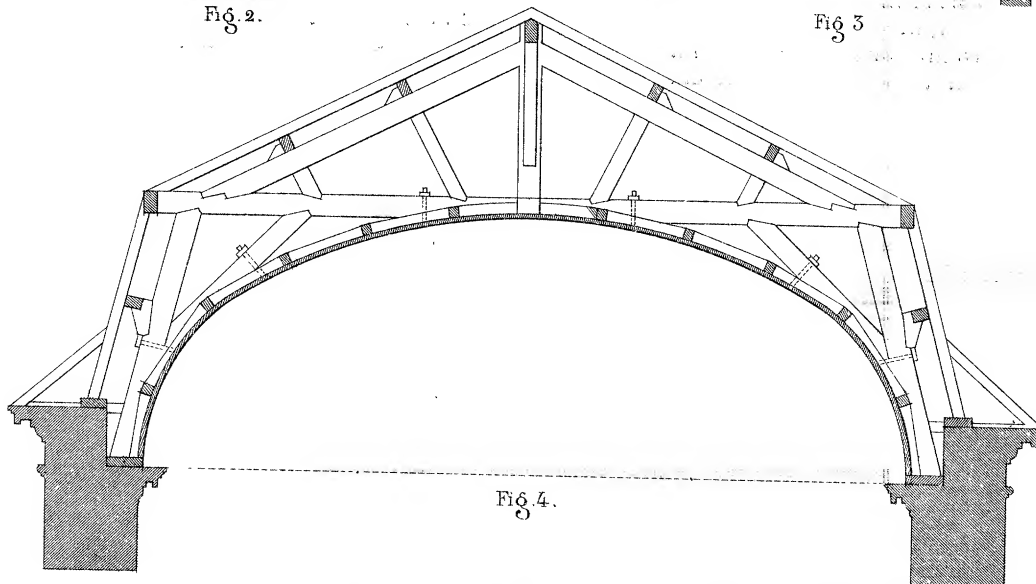


Fig. 4.

P. Esquié, del.

CHARLES SCHMID, ÉDITEUR, 51, Rue des Ecoles, Paris.

Strasmann, sc.

Les formes à la Mansard s'espacent comme les autres formes, en général, de 4 à 5 mètres. Lorsque les combles types Fig. 1 2 3 doivent servir à l'habitation, on supprime les aisnières, f que l'on remplace par des équerres en fer. Le tirant a reçoit alors une série de pièces de bois espacées de 0,33 d'axe en axe et d'un équarrissage de 0^m17 x 0^m07, sur lesquelles sont clouées les lattes destinées à recevoir l'enduit en plâtre.

PLATE 71

HIP ROOFS

When roofs do not terminate with gables inclined framing is used. These triangular framed inclines placed at the ends of a roof are called hips. If the walls are at right angles it is called a square hip. If the walls are not so arranged it is called a skew hip.

GLOSSARY

Aretier. Hip.
Chevrons. Rafters.
Croupe. Hip panel.
Demi ferme. Half truss.
Empanons. Hip rafters.

Entrait pouvant porter plancher.
Tie beam carrying ceiling.
Ferme. Truss.
Longs pans. Long panel.

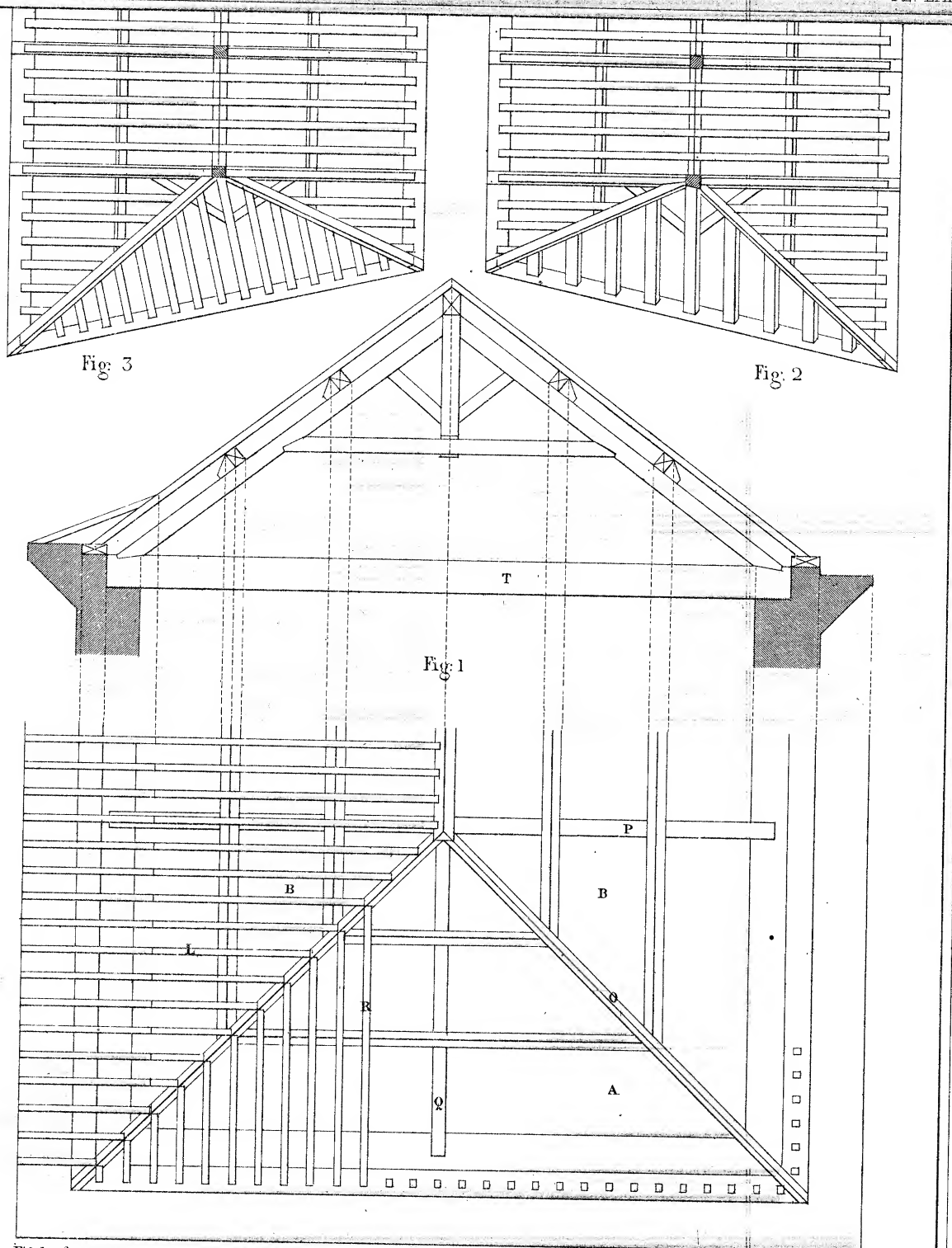


Fig 1 Groupe droite
Fig 2 Croupe biaise avec
empanons décroisés
Fig 3 Croupe droite avec
empanons délardés

A Croupe
B Longs pans
P Ferme
Q demi-férme

O Arêtier
L Cheorons
R Empanons
T Entrait pouvant porter
plancher

P. Esquis del.

CHARLES SCHMID, ÉDITEUR, 51, Rue des Ecoles, Paris.

Strasman. sc

Quand les combles ne se terminent pas par des pignons on établit à leur place des pans de bois inclinés. Les pentes triangulaires en charpente placées aux extrémités d'un comble portent le nom de croupes. Si les murs sont à angle droit la croupe est dite droite. Si les murs ne sont pas ainsi disposés la croupe est dite biaise.

WOODWORK—STUDIES OF DOORS AND WINDOWS

This plate presents the arrangement and details of interior doors and plain windows. Wood being subject to expansion, contraction and warping, the problem to solve in woodwork consists in overcoming these several difficulties. It is necessary then in preventing warping to make the upright and transverse members of dimensions sufficient to overcome this action and to reinforce them with iron angles. To prevent this contraction and expansion light pieces of straight grained wood should be used. Then the woodwork should be put together in such a way that the variations of the wood will not cause any injury to the exterior appearance of the woodwork. The details on this plate show the method to adopt. Exterior doors differ but little in construction from interior doors, except that they are made heavier.

GLOSSARY

Batis de dormant.	Jamb.	Moultures de chambranle.	Casing.
Battants de noix contre dormant.		Pauneaux.	Panel.
Hinge stiles.		Paumelle.	Hinge.
Battants meneaux.	Meeting stiles.	Petis bois.	Muntins.
Cadres de panneaux.	Panel mouldings.	Serrure.	Lock.
Crémone.	Bolt.	Traverse de dormant.	Sill.
Équerre en fer.	Iron angle.	Traverse du haut.	Top rail.
Jet d'eau.	Drip rail.	Traverses.	Rails.
Montants.	Stiles.	Verrou.	Bolt.

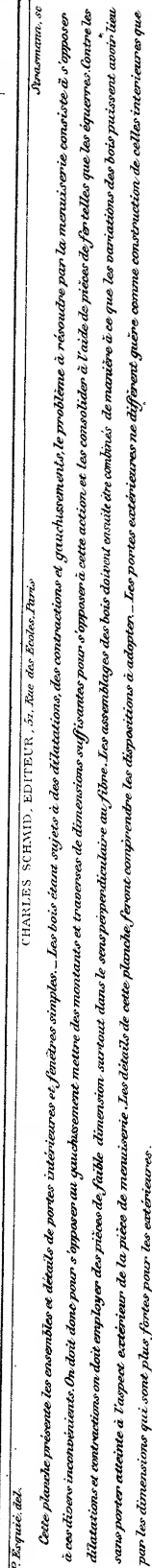


PLATE 73

BARREL AND CLOISTER VAULTS

Fig. 1 represents a plain barrel vault constructed in stone.
Fig. 2 and 3 represent two cloister vaults; that is to say, vaults formed by the intersection of two barrel vaults. These two barrel vaults can be alike, which simplifies the arrangement. When it is necessary to allow the light to penetrate through the top the method in Fig. 3 is used.

Fig. 1

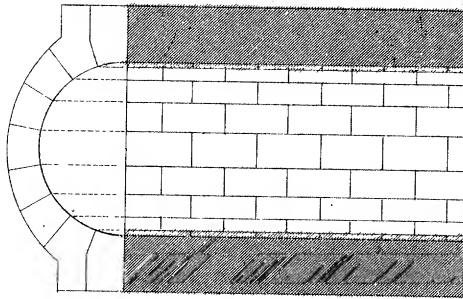


Fig. 2

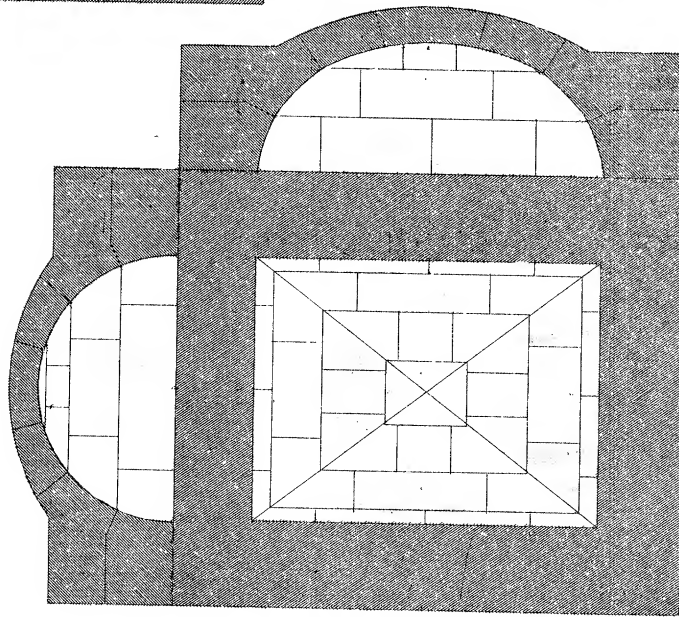


Fig. 3

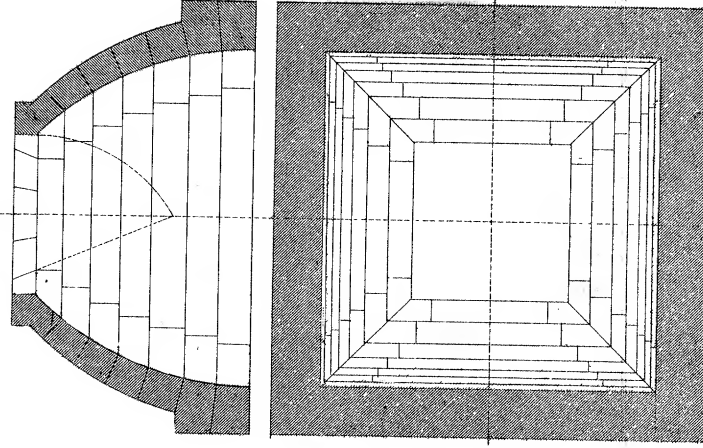


Fig. 1 Voûte en berceau
 Fig. 2 Voûte en arc de cloître
 Fig. 3 Voûte en arc de cloître
 accolée par le haut

Plaqueau del
 La fig. 1 représente une voûte en berceau droite avec son appareil en pierre. — La fig. 2 et 3 représentent deux voûtes d'arc de cloître, c'est-à-dire, formées par l'intersection de deux berceaux, des deux berceaux perpendiculaires.
 Lorsque l'on veut faire pénétrer la lumière par la partie supérieure on emploie la disposition de la fig. 3

Strasman, sc

PLATE 74

STUDY OF VARIOUS TYPES OF GROINED VAULTS

Groined vaults are formed by the intersection of two or more barrel vaults. Several examples are given in order to show some of the varieties of this type of vault.

Fig. 1 *Voûte d'arête barlongue*Fig. 2 *Voûte d'arête à double arête
avec pendentifs*Fig. 3 *Voûte d'arête à double arête
et à pans coupés*

Fig. 1

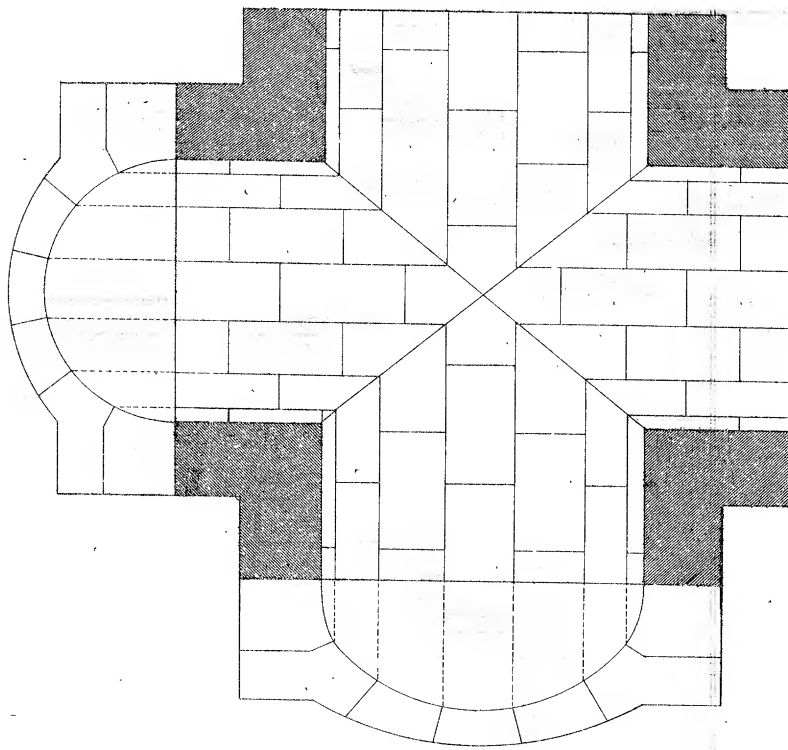


Fig. 3

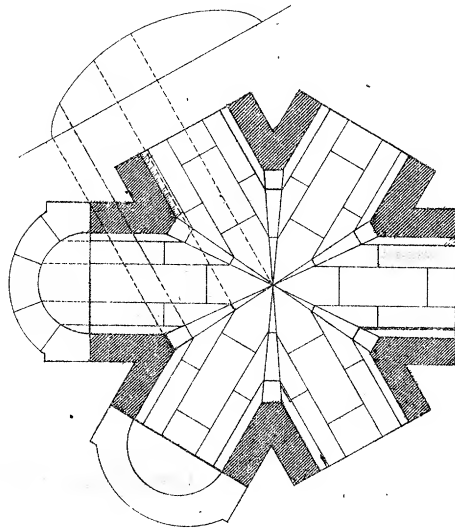


Fig. 2

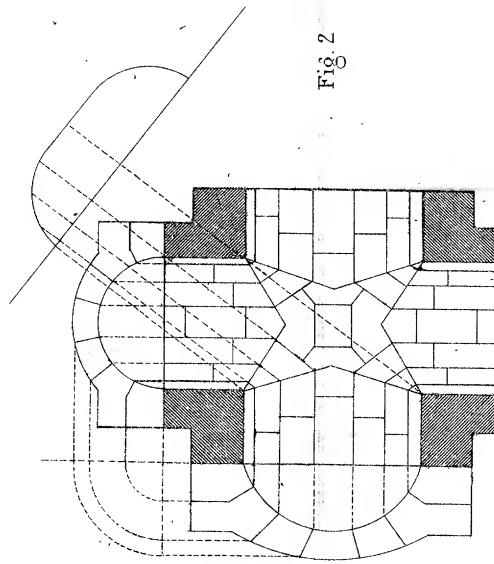


PLATE 75

VAULTS ON PENDENTIVES

The vault on Pendentives with a cupola is obtained by cutting a sphere with four vertical planes. When it is desired to have the light penetrate the top part, it is cut by a fifth plane, which in this case is horizontal. Two kinds of construction for this type of vault are given. For further details the student is referred to special books on stone cutting.

Fig. 1

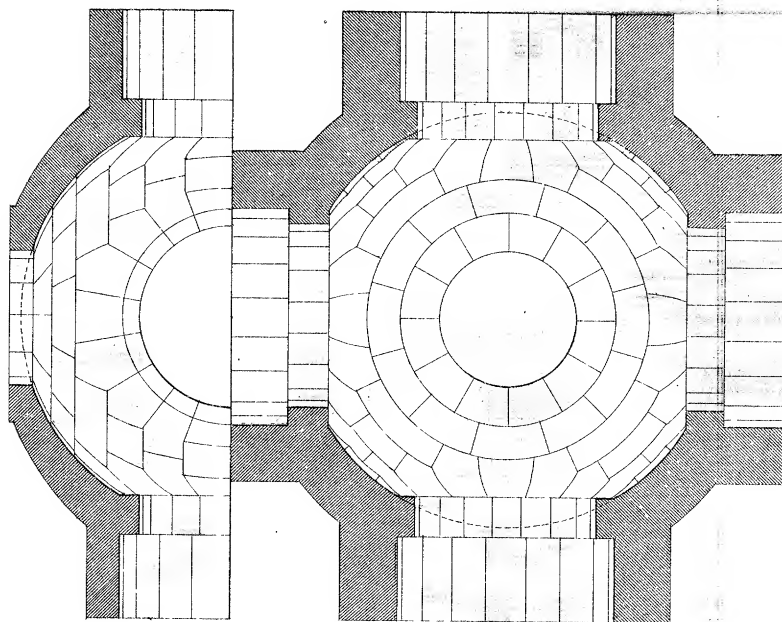


Fig. 1 Voûte sur pendentif avec
trumeaux, lunettes et arcs
doubleaux.

Fig. 2

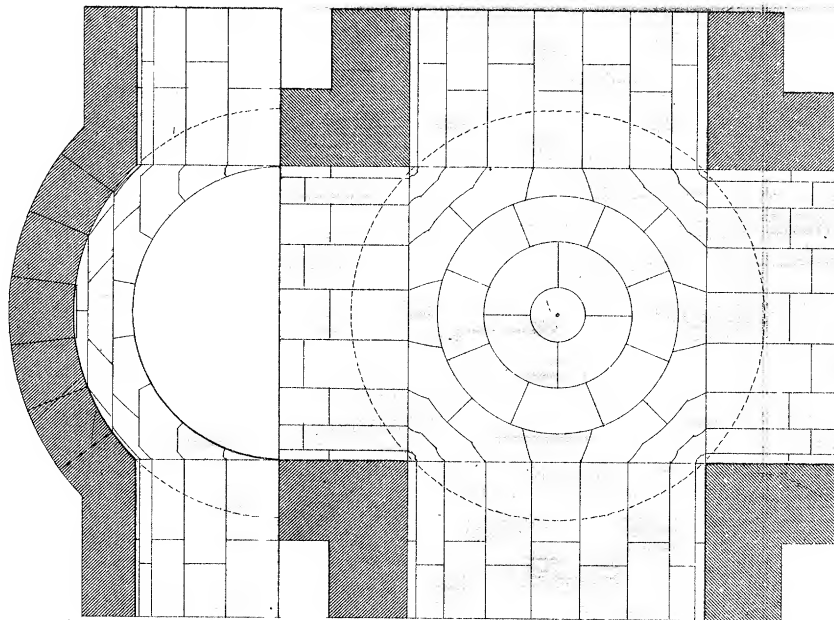
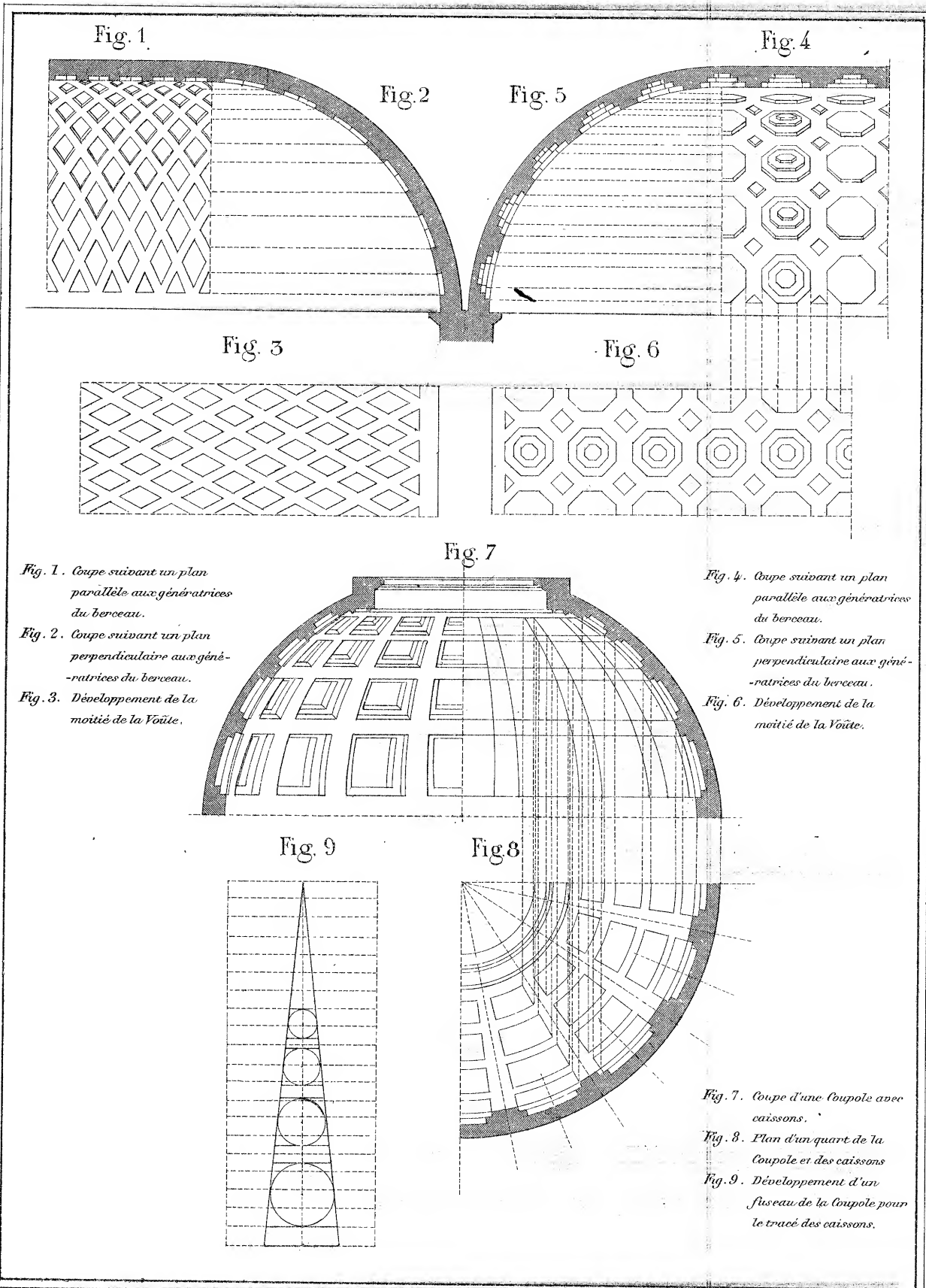


Fig. 2 Voûte sur pendentif avec
lunettes.

PLATE 76
STUDY OF CAISSONS

Caissons are hollow compartments formed on the surface of a vault in order to diminish the weight and at the same time retain the desired solidity. Caissons offer a degree of richness appropriate to the building which they embellish, sometimes by their form, sometimes by the ornament that is applied. Some examples are here given. To draw the caissons in projection it is necessary to develop a portion of the vault sufficient to have all the elements of the decoration. Then carry forward all the sides by means of the lines which generate the surface. The surface of the cupola cannot be exactly developed, but an approximation can be made by developing a segment which is taken as small as possible.



P. Fosqué, del.

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Strasmann, sc.

Les caissons sont des compartiments creux formés sur la surface d'une voûte afin d'en diminuer le poids tout en conservant la solidité désirable, les caissons sont susceptibles d'offrir un degré de richesse approprié à l'édifice à décorer, soit par leur forme soit par les ornements qui seront appliqués. Nous donnons ici quelques exemples. Pour tracer les caissons en projection il faut pour les berceaux développer une portion de voûte suffisante pour avoir tous les éléments de la décoration. On reportera ensuite toutes les parties aux moyens des génératrices de la surface. Pour les coupôles on ne peut exactement développer la surface on ne peut donc opérer que par approximation en développant un fuseau que l'on prendra le plus petit possible.

GLOSSARY

Abaque. Abacus.
Aisslier. Brace or Knee Brace
Annelet orle ou ceinture. Cincture or Filet.
Antes. Antis.
Appui. Window Sill.
Arbalétrier. Principal rafter.
Architrave. Architrave.
Archivolte. Archivolt.
Aretier. Hip.
Assises. Stone Courses.
Astragales. Astragal.
Atre de la Sheminée. Hearth.

Baguette. Astragal.
Balustrade corinthienne. Corinthian balustrade.
Balustrade dorique. Doric balustrade
Balustrade ionique. Ionic balustrade.
Balustrade toscane. Tuscan balustrade.
Base. Base.
Bâti de dormant. Jamb.
Bâton ou baquette. Astragal.
Battants de noix contre dormant. Hinge stiles.
Battants meneaux. Meeting stiles.
Blochet. Blocking.

Cadres de panneaux. Panel mouldings.
Cannelure demi-circulaire. Semi-circular flute
Cavet. Cavetto.
Ceinture. Cincture or fillet.
Chambranle. Architrave or frame (plain or moulded).
Chantignolle. Wooden block.
Chapiteau. Capital.
Chapiteau des triglyphes. Capitals of the triglyphes.
Chevetres. Trimmers.
Chevron. Rafter.
Contrefiche. Strut.
Congé. Conge or apophyge.
Congé inferieure. Lower conge or apophyge.
Coque des oves. Egg shell.
Corniche. Cornice.
Corniche de la porte. Cornice of the door.
Cote de la cannelure. Listel separating the flutes.
Coupe de la, etc. Section of the, etc.
Coupe de la volute sur la ligne. Section of the volute upon the line.
Coupe larmes. Drip.
Coyau. False rafter.
Crémone. Bolt.
Croix de St. André. St. Andrew's cross.
Croupe. Hip panel.
Cymaise. Cymatium.
Cymaise ou doucine. Cymatium or cyma recta.

Dards. Darts.
Doucine. Cyma recta or cymatium.
D'axe en axe. From axis to axis.
Décharges. Relieving brace.
Demi ferme. Half truss.
Denticules. Denticils.
Dé ou dex. Die.
Dé ou Tronc. Die or dado.
Diamètre. Diameter.

Echelle pour le, etc. Scale for the Partie.
Elevation de la, etc. Elevation of the, etc.
Empanons. Hip rafters.
Entrait. Bottom chord, or collar beam.
Entrait pouvant porter plancher. Tie beam carrying ceiling.
Equerre en fer. Iron angle.
Étrier en fer. Iron stirrup.

Face de l'Abaque. Face or fascia of the abacus.
1 ère Face de l'architrave. First face of architrave.
2 ème Face de l'architrave. Second face of the architrave.
Faitage. Ridge piece.
Faux chevêtres. False trimmers.
Feuille des caulicoles. Leaf of the caulicoles or small stems.
Ferme. Truss.
Filet. Fillet.
Filet ou listel. Fillet.
Filet ou anneau. Fillet or ring.
Frise. Frieze.
Frise de la porte. Frieze of the door.
Fût. Shaft.
Fût corinthien renflé. Corinthian shaft entailed.
Fût de colonne torse. Shaft of column twisted.
Fût ou vif. Shaft.
Fût toscan diminué au tiers. Tuscan shaft diminished from the one-third point.

Gousses. Pods.
Gouttes. Drops.
Gouttière. Pedestal cap.
Gorgerin. Neck.
Grande feuille. Great leaf.
Grande Salle. Large hall.
Guêule droite. Cyma recta or cymatium.
Guettes. Diagonal braces.

Hauteur du, etc. Height of, etc.
Hauteur de dé. Height of the die or dado.

Imposte. Impost.
Imposte pour l'arcade toscane sans piedestal. Impost for the Tuscan arcade, without pedestal.
Indications des figures. Explanation of the figures.

Jambe de force. Counter-brace.
Jambette. Stanchion.
Jet d'eau. Drip rail.

Larmier. Corona.
Ligne perpendiculaire nommée cathete. Perpendicular line called cathetus.
Lincir. Trimmer.
Linteaux. Lintels.
Listeaux. Plural of listel.
Listel. Listel.
Listel de la volute. Listel of the volute.
Listel ou ceinture. Listel or cincture.
Longs pans. Long panel.

Marches. Steps.
Mètre. Meter—Equivalent to 39.37 inches.
Métope. Metope.
Méthode pour le toscan et le dorique. Method for the Tuscan and the Doric.
Méthode pour l'ionique, le corinthien et le composite. Method for the Ionic, the Corinthian and the Composite.
Module. Arbitrary term for a unit of measure or proportion.
Module pour la distance re la cathete a l'axe. Module for the distance from the cathetus to the axis.
Montants. Stiles.
Mutule avec gouttes en dessous. Mutule with drops underneath.
Moulures de chambranle. Casing.

Noms de chacun des members, etc. Names of each of the members of mouldings composing the base and the pedestal of the Tuscan order.

Noms de chacun des members de moulures, etc. Names of each of the members of mouldings, composing the entablature and capital of the Tuscan order.

Oeil de la volute avec le détail des points de centre. Eye of the volute with the detail of centre points.

Ou 2 fois la largeur. Or two times the width.
Oves. Eggs.

Panneaux. Panels.
Panne de lierne. Purlin.
Pannes. Purlins.
Pannes de brisis. Angle purlins.
Partie. Part or minute—arbitrary division of the module.

Paumelle. Hinge.
Petits bois. Muntins.
Petite feuille. Small leaf.
Plan de, etc. Plan of, etc.
Plan de la, etc. Plan of the, etc.
Plinthe. Plinth.
Plinthe ou socle de la base. Plinth or base.
Poincon. King post.
Portique. Portico.

Profil de la, etc. Profile of the, etc.
Profil du coussinet sur la face latérale. Profile of the cushion upon the side face.
Projection horizontale. Horizontal projection.
Projection verticale. Vertical projection.
Poteaux corniers. Corner posts.
Poteau d'huissierie. Window or door post.
Poutre avec lambourde. Beam with bearing plate for joists.
Poutre portant solives. Beams supporting joists.

Quart de rond. Quarter round.

Reglet ou listel. Listel.
Remplissage. Filler.
Rose ou fleuron. Rose or rosette.

Sablière. Wall plate.
Sablières. Foundation plates.
Sablières de chambrée. Wall plate.
Scotie. Scotia.
Scotie inferieure. Lower scotia.
Scotie superieure. Upper scotia.
Serrure. Lock.
Socle de la base. Plinth of the base.
Socle maçonnerie. Masonry plinth or foundation.

Socle. Plinth.
Solives. Joists.
Solives d'enchevêtrement. Trimmer joist.

Talon. Heel moulding or ogee.
Talon renversé. Inverted cyma.
Tirant. Tie beam.
Tore. Torus.
Tournisse. Studding.
Traverses. Rails.
Traverse de dormant. Sill.
Traverse de haut. Top rail.
Triglyphes avec cannaux. Triglyphes with channels.

Verrou. Bolt.
Volute. Volute.